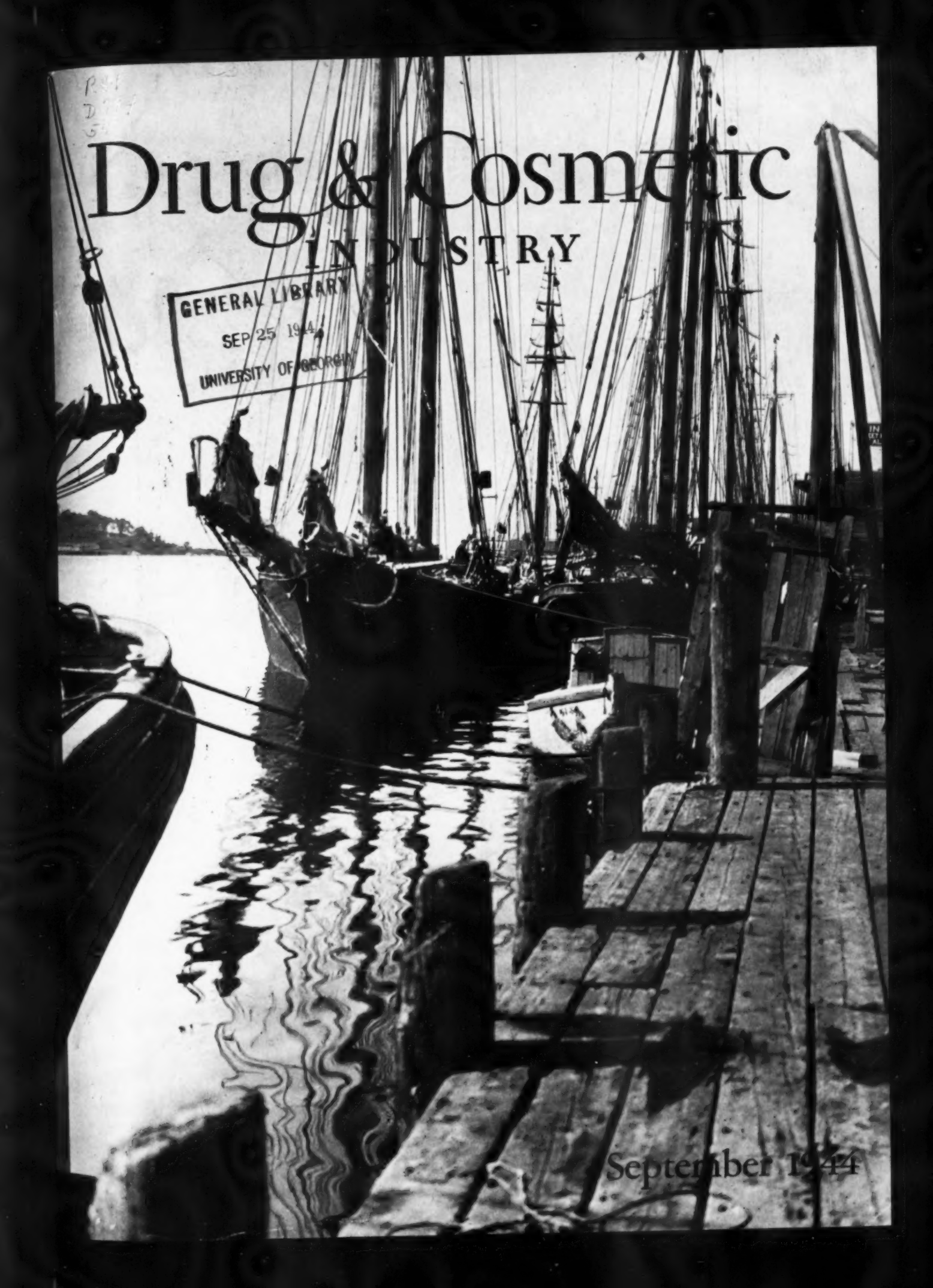
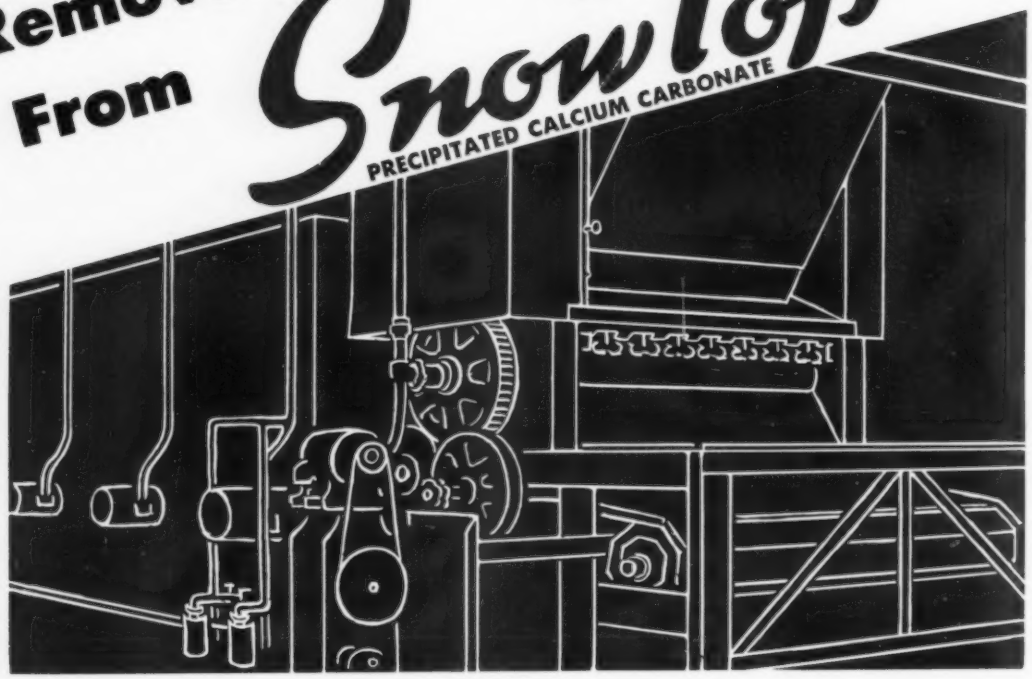

Drug & Cosmetic
INDUSTRY
GENERAL LIBRARY
SEP 25 1944
UNIVERSITY OF GEORGIA
September 1944

THIS IS THE DRYER

That Removes Process Water From Snow Top

PRECIPITATED CALCIUM CARBONATE



Snow Top Precipitated Calcium Carbonate is scientifically manufactured under strict laboratory control to insure absolute uniformity. Here is an explanation of that part of the process which removes the process water. This is but one of the many manufacturing steps necessary to deliver to you America's finest precipitated calcium carbonate.

Each step in the process of converting lime back into calcium carbonate is made in the presence of water and the product of the carbonators after its final screening is still in the form of a rather thin slurry. Before the carbonate can be used or shipped all of the process water must be removed and this is accomplished in the dryer. First the slurry is passed over a filter which draws off most of the water and leaves a wet cake consisting of approximately equal amounts of calcium carbonate and water. This is next passed over a heated and grooved roll where it is formed into short sticks of uniform cross-section, the uniformity of size being an assurance of uniformity of drying. The sticks fall on to a slow moving conveyor, made of perforated bronze plates, and there build up a loose bed of the still-wet carbonate. As the conveyor progresses slowly through the dryer, heated air is circulated through the loosely formed layer of carbonate by thirteen large fans, in succession, until at the discharge less than 0.5% moisture remains in the carbonate. At this stage the minute particles which came from the carbonator, though dry, are still held together loosely in the same sticklike form in which they entered the dryer, and must be separated and converted into a powder as the final step in the process of becoming Snow Top Precipitated Calcium Carbonate.

Snow Top Precipitated Calcium Carbonate ★ *Abietic Acid* ★ *Nuchar Activated Carbons* ★ *Liquid Caustic Soda* ★ *Chlorine* ★ *Lignin* ★ *Liqro Crude Tall Oil* ★ *Indusoil Distilled Tall Oil* ★ *Tall Oil Pitch* ★ *Sulphate Wood Turpentine*

SNOW TOP

INDUSTRIAL CHEMICAL SALES

DIVISION WEST VIRGINIA PULP & PAPER COMPANY

230 PARK AVENUE, NEW YORK 17, N.Y. | 35 E. WACKER DRIVE, CHICAGO 1, ILLINOIS | 748 PUBLIC LEDGER BLDG., PHILADELPHIA 6, PA. | 844 LEADER BLDG., CLEVELAND 14, OHIO

IN WARFARE the toughest jobs go to the Infantry. They're built and trained to take it. And in the field of packaging wherever a really tough collapsible tube is required, it's a job for SHEFFALLOY *Sheffield Process* Tubes! They too, are built for the hardest kind of service.

The extra toughness of these well-known tubes is the result of our exclusive Sheffield Process of mixing, melting, and tempering the metals. And their remarkable success in packaging many products unfriendly to collapsible tube metals is the result of VINICOTE Inner Coatings . . a series of more than 50 linings, developed by our research staff. If "SHEFFALLOY" and "VINICOTE" are unfamiliar trade names to you, better write for complete information now.

Sheffalloy TRADE MARK REGISTERED
SHEFFIELD PROCESS TUBES

NEW ENGLAND COLLAPSIBLE TUBE CO.

3132 S. CANAL STREET, CHICAGO 16 • NEW LONDON, CONN. • W. K. SHEFFIELD, 500 FIFTH AVENUE, NEW YORK 18
THE WILCO COMPANY, 6800 McKINLEY AVE., LOS ANGELES 1

Drug & Cosmetic INDUSTRY

SEPTEMBER 1944

CONTENTS

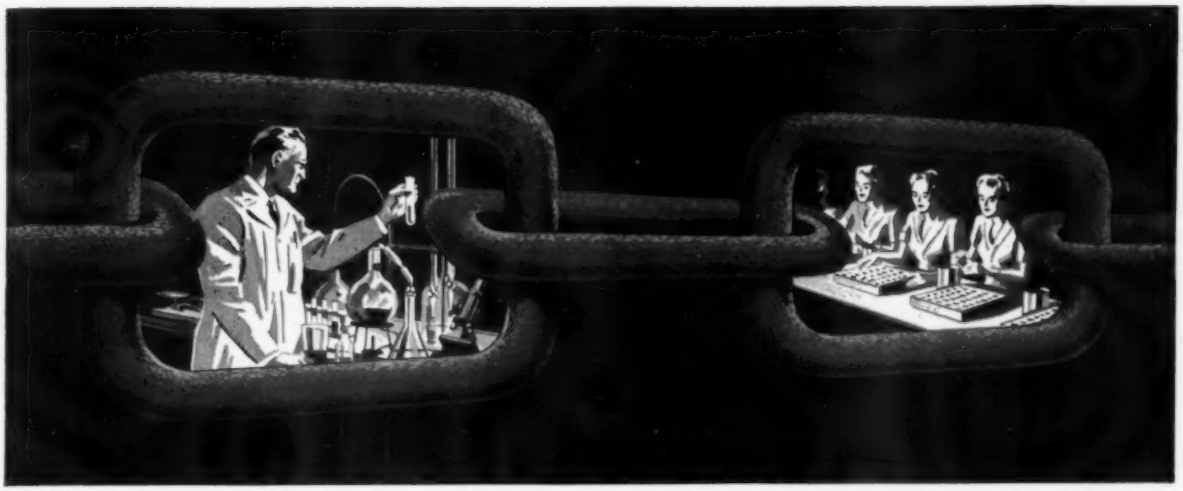
KEEPING POSTED	273
POST-WAR PROGRAM	278
BRUSHLESS SHAVING CREAMS	280
PROFLAVINE	282
ON SOLID GROUND	284
BATH PREPARATIONS	286
SULFADIAZINE	288
PACKAGING AND SELLING	291
NEWS	309
PRODUCTION FORUM	319
INDUSTRY'S BOOKS	335
PERFUMER'S SHELF	336
ADVANCING THERAPY	340
COMPOUNDER'S CORNER	344
PURCHASING DEPARTMENT	347
READERS' QUESTIONS	364

The Drug and Cosmetic Industry is published monthly by Drug Markets, Inc., Frazer V. Sinclair, President and Treasurer; Thomas R. Farrell, Vice-president and Secretary. Publication Address, 28 Renne Ave., Pittsfield, Mass., U. S. A. Editorial and General Office, 101 West 31st St., New York, 1, N. Y., U. S. A. Business Manager, Frazer V. Sinclair; Advertising Representatives, P. W. Alexander (on leave with U. S. Army), Walter M. Brauneiss, C. R. Keeley; Production Manager, Katherine Hyde; Circulation Manager, Harry G. Kelbly. Subscription price—$2.00 a year, in advance, Foreign Countries, $3.00. Single copies, 25c; Back issues 50c. Entered as Second Class Matter, January 1, 1928, at the Post Office at Pittsfield, Mass., under the Act of March 3, 1879. Member of Audit Bureau of Circulations.

Contents Copyrighted 1944 by Drug Markets, Inc.

Printed by Sun Printing Co., Pittsfield, Mass., U. S. A.

THOMAS R. FARRELL, Editor
ELMER SHEETS, Managing Editor
FRANCIS CHILSON, Production Editor
M. A. LESSER, Technical Editor
HARRY G. KELBLY, Market Editor
HILDA C. McCOLLOM, Art Director



forging the completing link

Dow research may have discovered just the thing for your latest development

Since its very inception, Dow has devoted much time and a large measure of its resources to research. As a result of this continuous effort over a long period, Dow has in its laboratories today literally thousands of chemicals whose practical usefulness has not yet been definitely or finally determined. These chemicals are available to you, and one of them may prove to be just the material required to complete a development of your own.

This Dow "library" of special chemicals, and the long experience of Dow research chemists . . . Dow's ability to produce chemicals for use by pharmaceutical manufacturers as intermediates or as finished products . . . Dow's well-known position as a leading source of basic, "old-line" chemicals—all these add up to the sum total of Dow's cooperation with the pharmaceutical industry.

If any, or all, of these services can be of help to you, you are invited to consult Dow. Your inquiry will be handled confidentially and promptly.

THE DOW CHEMICAL COMPANY, MIDLAND, MICHIGAN

New York • Boston • Philadelphia • Washington • Cleveland • Detroit
Chicago • St. Louis • Houston • San Francisco • Los Angeles • Seattle

PHARMACEUTICAL

Chemicals

DOW

CHEMICALS INDISPENSABLE
TO INDUSTRY AND VICTORY

What's New at NYQ

"At NYQ plant—One of the many recent installations important in control of purity. Air conditioned equipment protects the product while manufactured, improves quality and has increased production and speed of deliveries."

To meet the tremendous demands for N.Y.Q. products created by war needs, the facilities of N.Y.Q. have been expanded enormously. A large percentage of our production goes to our armed forces. We are doing, and shall continue to do our best, to supply as much N.Y.Q. material to normal consumer channels, as the exigencies of war will permit. And when peace comes, our friends in the trade will find the expanded facilities of N.Y.Q. an added guarantee of the reliability of N.Y.Q. products and service.

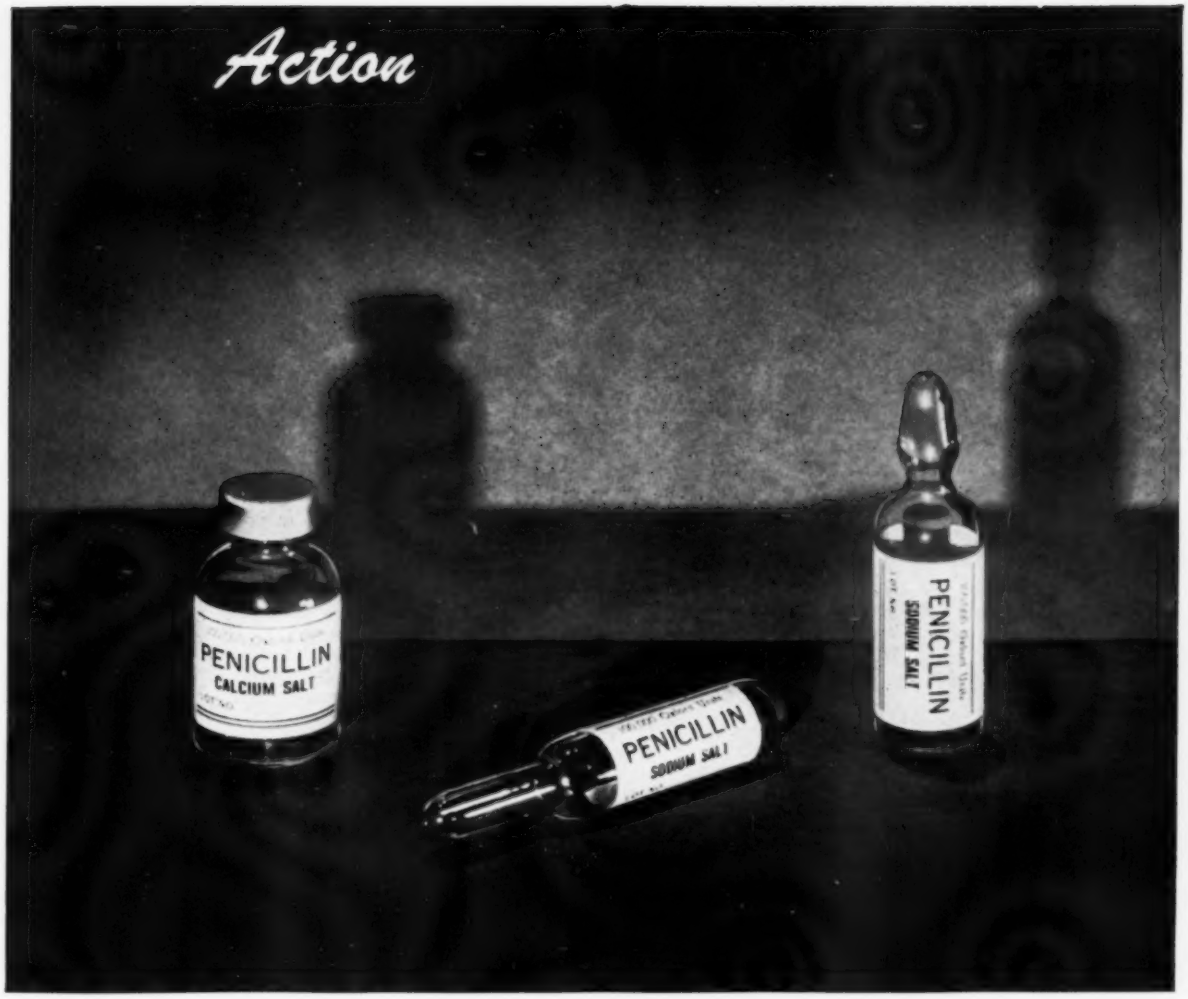
NYQ

Symbol of Quality

GENERAL OFFICES
99-117 North Eleventh St.
Brooklyn 11, N. Y.

ST. LOUIS DEPOT
915 Market Street
St. Louis 1, Mo.

BE CONFIDENT OF HIGHEST QUALITY BY USING N.Y.Q. CHEMICALS



Penicillin is but one of many invaluable drugs packaged for convenience and safety in containers of Kimble Neutraglas. . . . Critical drugs and pharmaceuticals, life-saving and pain-relieving materials, could never be effective without the glass containers that carry them to the point of action.

KIMBLE *Glass* CONTAINERS *For Assurance*

• • • *The Visible Guarantee of Invisible Quality* • • •

In a San Diego plant the Sky Car is in an advanced stage of development. It will fly—descend—fold its wings and become a motor car getting 25 miles a gallon. A new miracle from creative hands—but an evolution from the old. Perfume is as old as time, but it is amazing how new the creative hands of our incomparable perfume-chemists can make it.

VAN AMERINGEN · HAEBLER, INC. · 315 FOURTH AVE., NEW YORK 10, N. Y.

SORBOTEX 301

. . . a new development in

ABSORPTION BASE

WHAT IT IS

SORBOTEX 301 is a white, ointment-like, odorless mixture of higher fatty alcohols and esters in a hydrocarbon base. It does not contain lanolin. It is free from any tendency to eventually discolor the products in which it is used or to impart an undesirable odor to them. Its water absorption is substantially greater than that of absorption base containing either lanolin or lanolin isolates.

WHAT IT DOES

SORBOTEX 301 makes white, stable water-in-oil emulsions. In the presence of an alkali, it is also a highly effective emulsifier and stabilizing agent for oil-in-water emulsions, an advantage offered by very few types of absorption base.

USES

SORBOTEX 301 is applicable to night creams, cold cream, ointment bases, permanent wave preparations, etc. It can also be used as an extender for lanolin.

Suggested percentages: In water-in-oil emulsions, that is, creams having a high fat-content, such as night creams, for instance, up to 25 percent. In oil-in-water emulsions, that is, creams with a low oil-content, such as vanishing-type face and hand creams, up to 5 percent. In permanent wave preparations, up to 2 percent.

MAKE THIS TEST

Make a small batch of one of your creams, replacing the absorption base that you are now using with Sorbotex 301. Compare the cream containing Sorbotex 301 with that made with your present absorption base, as to appearance, texture, emollient effect, and stability. We will gladly supply the Sorbotex 301 required to make the test, without charge.

SORBOTEX 301 is made of freely available raw material; it can therefore be supplied promptly in all quantities. Its price is attractive.

VAN DYK & COMPANY
INCORPORATED 1904

MANUFACTURERS OF PERFUMERY AND COSMETIC RAW MATERIAL SINCE 1901
OFFICES, LABORATORIES & FACTORY: MAIN & WILLIAM STREETS, BELLEVILLE 9, N. J.
LOS ANGELES: 1282 SUNSET BOULEVARD

schimmel

for

successful

synthetics

SCHIMMEL & CO., INC.
601 WEST 26TH STREET
NEW YORK 1, N. Y.

INSIDE NEWS

SEPTEMBER PREPARED BY NATIONAL CAN CORPORATION, NEW YORK, N. Y. 1944

Germany Tightens Europe's Belt While British Expand Empire Food Resources

Average food rations in Germany are still sufficient to meet average requirements. However, the German diet contains less meat, meat products and fat than before. The theoretical calorie intake is still up to pre-war standards; milk consumption for children has been fairly well maintained; and it does not appear that the German diet is poorer in essential minerals and vitamins.

On the other hand, in the Baltic States, Slovakia, France and Italy, rations are too low for health and working efficiency, representing between 2500 and 1500 calories per adult male. Much of the vegetable and fruit crop is exported to Germany; the diet is monotonous; fats, proteins and probably vitamins are absolutely scarce.

While rations in Czechoslovakia, Belgium, Finland, the Netherlands and Norway represent between 2500 and 2800 calories per adult male, semi-starvation conditions prevail in Poland, Greece and parts of Yugoslavia.

Great Britain, like the European neutrals with the exception of Spain, is in a more favorable position than Germany. In the United Kingdom there has never been rationing of total calories; meat, bacon, cheese, fats, sugar and jam are rationed per head, but rations are considered adequate to meet average physiological demands. Milk consumption is higher than before the war; some vegetables and fruits are practically non-available; but all consumers may obtain as much bread and potatoes as they want.

According to a League of Nations report on food supply and rationing during '43 and '44, increases in the incidence of tuberculosis and diphtheria in occupied Europe can be traced directly to malnutrition. In Norway, for instance, where 15,000 cases of diphtheria are reported for '43, losses in body weight up to 40 pounds are not uncommon.

The British Empire has met the need for increased food production by taking a number of steps, some of which have post-war implications.

In the Union of South Africa, 50 companies are now turning out canned products. At the Low Temperature Research Laboratory at Cape Town, a new canning section is studying food processing. It has devised new methods to stabilize the Vitamin C content of concentrated orange juice, to manufacture non-melting vegetable cubes for use in hot climates, and is working out new methods for pulping fruit for pectin and for processing fruit juices.

South African canners anticipate new markets in the Belgian Congo. A new factory is planned to process the shark products of the Natal coast to produce Vitamin A foods for Britain.

In Australia, two of the new canning plants built in '43 are devoted entirely to processing food for American forces in Australia and the South Seas. The Australian government has agreed to meet any loss on unsold stocks of canned fruits caused by lack of shipping space.

In New Zealand, agar-agar is being made from native seaweeds, following the example of the Russians who are producing this food, formerly a Japanese monopoly, from red seaweeds on the Siberian coast.

Other British food developments include a detailed study of cucumber and cucumber pickles in terms of moisture, protein, calcium, phosphorous and vitamin content; exploration of native foods, such as hare and venison, by a new cannery in the Scottish Highlands; and the use of bananas to make flour for bread in Kenya, East Africa. 732

Chlorellin

Chlorellin, a new antibacterial substance extracted from the fresh water alga, Chlorella, is a new member of the group of antibiotic substances, as is penicillin, extracted from the lower forms of plant life. Tests show high inhibitory action and some probable advantages over penicillin. 733

Paint Inhibits Bacteria

A new paint, based on a combination of phenolformaldehyde resin with a high percentage of polymerized tung oil has been found in England to produce a film which inhibits the growth of most bacteria even after the paint has been applied and dried six months. 734

German Process

If anyone happens to want "very sour thickened whey beverages" they may be glad to know that a German periodical reports that the vitamin C can be preserved in such products merely by keeping the whey in jars with screwed-on lids. 735

Enzymic Tenderizers

Osage orange trees, named for one of the most warlike of the Indian tribes, and heretofore useful mainly as hedges to keep out the neighbor's cattle, yield an enzyme which can be used in tenderizing meats and natural sausage casings. Two Canadian patents cover the use of the osage orange fruit and the fig as sources of enzymic tenderizers. 736

Deodorized Fish Oil

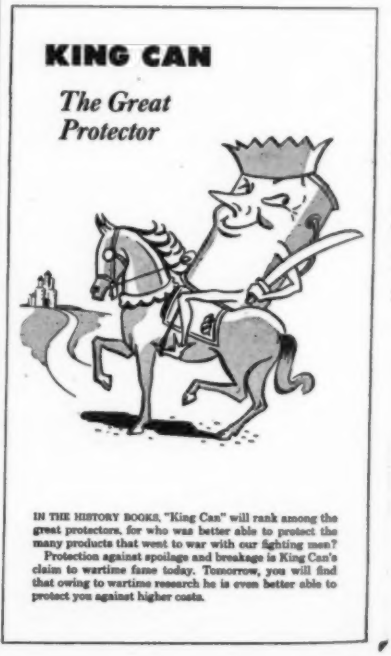
The taste and odor of vitamin-rich fish oils can be improved by treatment with "the fruit of the tomato plant". The dried pulp is used. Vitamin potency is not affected by the treatment and the beneficial effect is permanent, probably due to natural antioxidants in the tomato. 737

Grapes in "Wood-Wool"

Sulphur, or sulphur dioxide, can be used in many different ways in preserving the quality of fruit. Usually it is applied to fruits which are to undergo further processing. In South Africa, grapes being shipped to local markets for table use are packed in "wood-wool", that is, excelsior. And it is reported that very favorable results have been obtained through spraying the packing material with a small quantity of a solution containing sodium or potassium bisulphite. SO_2 is slowly released over a long period of time, so that a relatively small concentration is present at any one time, but the effect is persistent. 738

Valuable to Processing

A patent has recently been issued for an arrangement of apparatus which makes it possible to remove from a continuous processing chamber any glass jars which may have broken during the retorting, without shutting down the apparatus or disturbing the heating of the other jars being processed. 739


KING CAN
The Great Protector
IN THE HISTORY BOOKS, "King Can" will rank among the great protectors, for who was better able to protect the many products that went to war with our fighting men?
Protection against spoilage and breakage is King Can's claim to wartime fame today. Tomorrow, you will find that owing to wartime research he is even better able to protect you against higher costs.

NATIONAL CAN

PLANTS: NEW YORK · BOSTON · BALTIMORE · CHICAGO · HAMILTON, OHIO · FORT WAYNE, INDIANA

Spice Use Increase

A survey for American Spice Trade Association reveals increasing American interest in use of spices for home use . . . as well as spiced foodstuffs purchased. Canners and food processors will find interest in types of spices preferred and in listing of children's tastes in spiced foods. 740

"Pliobonded"

Plywood 1/48 inch thick can be cemented to a metal surface with a new type adhesive, rubberlike, which has been developed in this country. A metal sheet of any thickness attached in this way to a wood layer can be shape-bent, cut with shears or stamped out without cracking the wood or loosening it from the metal, and other metal units can be welded to the back of the metal sheet. 741

Thicker Tomato Juice

According to the findings of one of our state experiment stations, when tomato juice is extracted without sufficient heating, a pectinase always present in the tomato breaks down the pectin immediately after the juice is extracted and causes a thin, watery product which separates easily. Increasing the temperature of the hot break process sufficiently to inactivate this pectin-destroying enzyme will give a juice with a heavier body and smooth consistency. 742

A New Dessert

An interesting application of a controlled chemical reaction is shown in a new dessert powder. Desserts with a smooth, custardy texture can be prepared by substituting a lactone for the rennet used heretofore in making coagulated milk gels. The lactone liberates acid very slowly throughout the entire body of the milk, and in the process is changed to an edible simple sugar. This powder, sugar, flavoring and the lactone can be mixed in the proper proportions, dry. When it is desired to make a dessert, water at slightly above room temperature is added and the mixture is allowed to stand until set, then chilled. 743

A New Bactericide

Bacteria-destroying agents which can be obtained from molds, bacteria, and other simple forms of life, have been receiving much attention lately. Preliminary tests on a substance isolated from one of the higher plants indicate that these, too, may furnish antibacterial agents. This particular substance is Nordihydroguiaretic acid, which has also been receiving some attention as an anti-oxidant for fats and oil. The author suggests that this acid, although it does show definite value in destroying bacteria, may not be useful in chemotherapy, but that the higher plants in general should be investigated for other valuable products of this sort. 744

Technical Topics

RETARDS OXIDATION — Ethyl gallate, used in very small proportions, has been found to stabilize edible cottonseed, palm, and peanut oils against oxidation of the glycerides and objectionable changes in flavor. Retardation of oxidation is important, not only with respect to flavor, but because of the loss of vitamin A or carotene. 745

WEED KILLER — Weed killer for which special efficacy is claimed consists of furfuraldehyde, saturated with ammonium sulphocyanate, in diesel oil in the proportion of 1 to 20 by volume. 746

PARAFFIN INSULATION — Paraffin that does not melt below 270°F. has been synthesized with the aid of ruthenium catalysts in one of the Fischer processes. The product is said to be an excellent insulation for high-frequency electricity and a substitute for carnauba wax. 747

NEW DETERGENT LUBRICANT — Lithium compounds are being employed in a new detergent lubricant, which is claimed to keep internal combustion engines free of carbon deposits and scales. 748

TRICRESYL PHOSPHATE—A tricresyl phosphate type plasticizer is now being manufactured by a large chemical producer. 749

SULPHITE LYE — Sulphite lye use as a stabilizing agent for the surface treatment of roads has been found to add substantially to the bearing capacity of a gravel surface and to its resistance to shearing, according to tests carried out by the Province of Quebec Roads Department. 750

LAC-OIL VARNISH — Lac-oil varnish may be more easily and satisfactorily prepared if the shellac is previously mixed with red lead in boiling water. This facilitates dissolution in boiled oil. The incorporation of a little crepe rubber reduces the tackiness period of such varnishes. 751

ANT CONTROL — Mound-building prairie ants, which do much damage to highways and roadways in general, are effectively controlled by the injection of carbon bisulphide into their nests. From one ounce to three ounces is usually sufficient. Early spring is the best time for applying the treatment. 752

QUINOL RETAINS "A" — Loss of vitamin A in codliver oil ointments can be prevented by adding 0.2 percent of quinol. Lanolin should not be used in such preparations because of its deleterious action on the vitamin content. 753

ASCORBIC ACID NEEDED — Normal taste and flavor of orange or grapefruit beverages is better retained if ascorbic acid be added in excess of the quantity required to take up the free oxygen. 754

ALUMINUM STEARATE AIDS — Insecticidal oil sprays with a minimum phytocidal effect are made by adding from one percent to five percent of aluminum stearate, or similar metallic soap, to a light mineral oil. 755

MERCAPTOETHANOL — Mercaptoethanol, a liquid with the properties of both an alcohol and a mercaptan, has been developed by a large producer of fine chemicals. 756

CANNED UNPEELED APRICOTS — Canned whole unpeeled apricots, which practically disappeared last year because of the sugar shortage, are again being packed. Packing the fruit unpeeled requires more sugar, but it eliminates the steps of peeling and cutting in halves. OPA made available additional sugar for packing unpeeled fruit, in excess of the 1941 pack. 757

FEATHER FIBERS — Feather fibers, which are largely protein, may be used in plastics and surgical sutures. One hundred million pounds of feathers yearly, now largely wasted, may become available as an industrial raw material, by a new simple pickling process which avoids spoilage. 758

INORGANIC CANVAS — A new textile, made by combining glass and asbestos fibers, is termed an inorganic canvas, and has a high abrasion and heat resistance with light weight. 759

Every effort will be made to furnish additional information on these articles. Where such information is not obtainable, we will refer inquiries to the original source of the article. Write to National Can Corporation, 110 East 42nd Street, New York City. Please mention the number at end of article—also name of the magazine you saw it in.

NATIONAL CAN CORPORATION

Manufacturers of

SANITARY PACKERS CANS · PLAIN AND LITHOGRAPHED CANS FOR FOODS, DRUGS, OILS, PAINTS, VARNISHES · STEEL DRUMS AND PAILS

Deliveries Subject to Priority Ratings

(*Advertisement*)

New RCA Penicillin Process Speeds Production!

• TODAY, when the wonder drug penicillin is so vitally needed on the fighting fronts and in home-front sickrooms, the Radio Corporation of America reveals that a revolutionary method of production has been perfected in RCA Laboratories.

Tests at the new Squibb penicillin production center at New Brunswick, N. J., show that one RCA electronic installation can concentrate 2,000,000,000 Oxford units of penicillin in 24 hours—enough for 100,000 individual cases. This represents a considerable reduction in total production time.

Besides streamlining the elaborate evaporation method, the RCA electronic system includes these important advantages: reduction of operating costs, lowered maintenance costs, less possibility of mechanical difficulties and production delays, great savings in floor space, and impressive reduction in initial equipment costs.

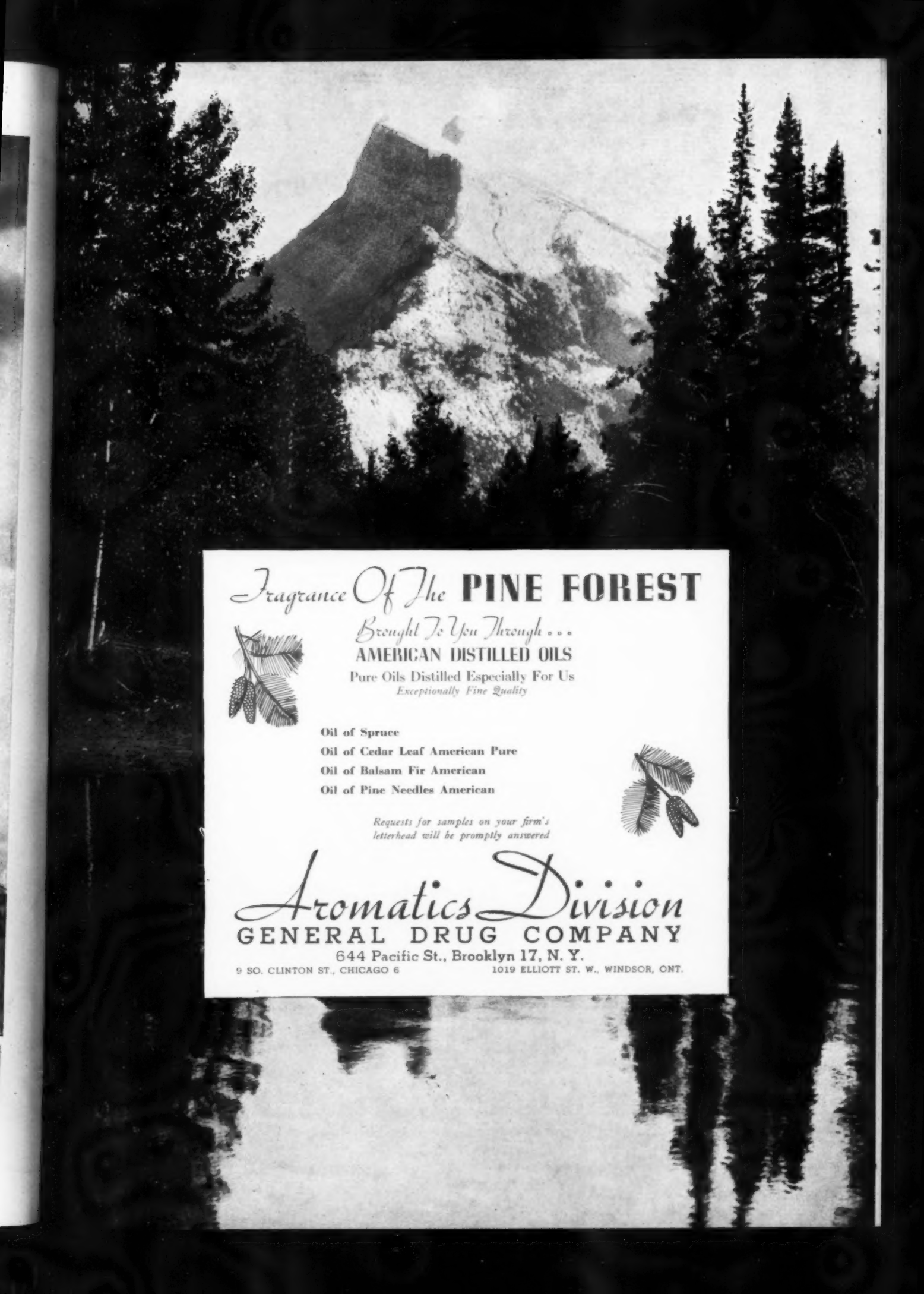
The new RCA electronic dehydrator of penicillin is shown here in operation at E. R. Squibb & Sons. This apparatus may be purchased from the RCA Victor Division, Radio Corporation of America, Camden, N. J.

RADIO CORPORATION OF AMERICA
RCA LABORATORIES • PRINCETON • NEW JERSEY

RCA leads the way in radio—television—phonographs—records—tubes—electronics

RCA

Listen to RCA's "The Music America Loves Best"—Sunday, 4:30 P.M., E.W.T., over the NBC Network ★ BUY WAR BONDS EVERY PAY DAY ★


Fragrance Of The PINE FOREST
Brought To You Through . . .
AMERICAN DISTILLED OILS
Pure Oils Distilled Especially For Us
Exceptionally Fine Quality
Oil of Spruce
Oil of Cedar Leaf American Pure
Oil of Balsam Fir American
Oil of Pine Needles American
Requests for samples on your firm's letterhead will be promptly answered
Aromatics Division
GENERAL DRUG COMPANY
644 Pacific St., Brooklyn 17, N. Y.
9 SO. CLINTON ST., CHICAGO 6
1019 ELLIOTT ST. W., WINDSOR, ONT.

Ideal Surroundings

• On the shores of the historic Delaware River, in the beautiful foothills of the scenic Catskill Mountains, is located one of America's most unique cosmetic institutions . . . the Port Jervis, N. Y. plant of Kolmar Laboratories.

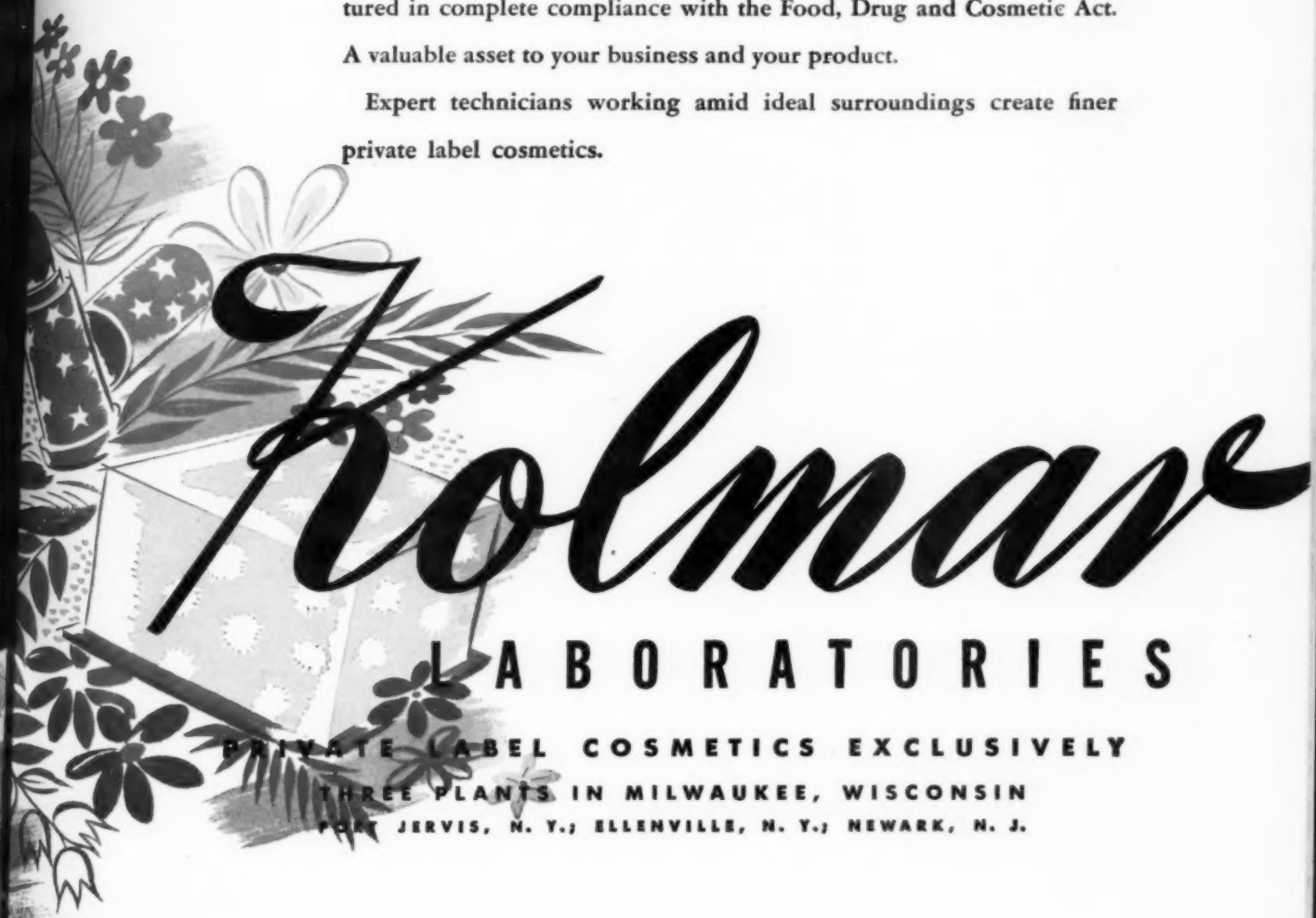
• Here on a high elevation, surrounded with the beauty of nature, you find a group of technicians imbued with a genuine *esprit de corps.* It is this ideal working condition coupled with the most modern manufacturing methods that is responsible for the outstanding recognition Kolmar Laboratories enjoy in the private label cosmetic industry.

FOR CREATING FINE COSMETICS

In Port Jervis is one of the six strategically located Kolmar plants. Here, like in all Kolmar plants, the Kolmar system of laboratory control of raw material is constantly employed to protect your product and reputation. Research, development and manufacture of beauty requisites is an exacting science at the Kolmar Laboratories. Your products will reflect the benefits of this superb cosmetic craftsmanship.

Kolmar experience and reputation assure you of products manufactured in complete compliance with the Food, Drug and Cosmetic Act. A valuable asset to your business and your product.

Expert technicians working amid ideal surroundings create finer private label cosmetics.



Kolmar

LABORATORIES

PRIVATE LABEL COSMETICS EXCLUSIVELY

THREE PLANTS IN MILWAUKEE, WISCONSIN

PORT JERVIS, N. Y.; ELLENVILLE, N. Y.; NEWARK, N. J.

REPRESENTATIVES: M. C. BOYD, DOUGLAS HAGGERTY, EMPIRE STATE BUILDING, ROOM 605, NEW YORK, N. Y.
WARREN CURRY, 2504 ALTON ROAD, N.W., ATLANTA, GA.; NORMAN KOLE, 955 MERCHANDISE MART, CHICAGO, ILL.
R. F. G. BYINGTON, 1260 N. WESTERN AVE., LOS ANGELES, CALIF.; RICHARD F. SPICKER, 419 WEST FIFTH ST. CINCINNATI, OHIO

OIL YLANG SYNTHETIC SUPERFINE

A COMPLETELY SYNTHETIC REPRODUCTION OF THE NATURAL BOURBON YLANG

This creation of our Perfume Laboratories is a remarkably accurate reproduction of the Natural Bourbon Ylang. It may be admixed to extend valuable supplies of the natural oil and in many places, it may be used to replace the natural oil entirely. We will be glad to send you samples for your examination.

AROMATIC PRODUCTS, INC.

15 EAST 30th STREET • NEW YORK 16, N. Y.

ATLANTA • CHICAGO • DALLAS • MEMPHIS • PITTSBURGH

SAN FRANCISCO LOS ANGELES

Sturge Standard
Precipitated
Chalk
Standard for over 50 Years
LIGHT, MEDIUM AND HEAVY GRADES
Rigid uniformity in the
specific grade desired.
Depend on STURGE for QUALITY
and UNIFORMITY
JOHN & E. STURGE
Limited
Distributors: H.J. BAKER & BRO. 271 Madison Ave., New York 16, N.Y.

ESSENCES

by

DREYER

ESSENTIAL OILS
AROMATICS

DREYER

YOUR PRODUCT WILL REFLECT
SPRINGTIME SPLENDOR
ALL YEAR LONG

With the addition of one of these exhilarating fragrances by Dreyer

FRESHENETTE - -	*5404*
SPRING AIR - -	*1964*
HILLCREST - - -	*1694 C*
SEVEN DREAMS - -	*2012*

Samples and Prices on Request

DREYER

P. R. DREYER INC.

DREYER

119 WEST 19th STREET
NEW YORK, N.Y.

STANTON LABORATORIES

Stanton Laboratories Thank You

their many friends and patrons in the drug and cosmetic industries, for their patience during our recent period of research and development on our THIOGLYCOLATES.

Our persevering organic research on THIOGLYCOLIC ACID and its useful compounds will go on, but even now, the rewards are ample and tangible.

Our innovations in AMMONIUM THIOGLYCOLATE give you the basic ingredient for cold permanent waving, "buffered" two ways (skin-protected and ammonia-sealed-in). It is stable and pure, and all these superior features are present in both our concentrated and formulated solutions.

●

We serve the biological field with our 98% Concentrated, pure THIOGLYCOLIC ACID and SODIUM THIOGLYCOLATE.

Your inquiries are invited

Stanton Laboratories Wyncote, Pa.
Manufacturing Chemists

A PRESERVATIVE NOT ON PRIORITY

BUTOBEN

Reg. U. S. Pat. Off.

Have current shortages of materials made it necessary for you to revise your formulas requiring a preservative? Or are you, perhaps, looking for a more potent one?

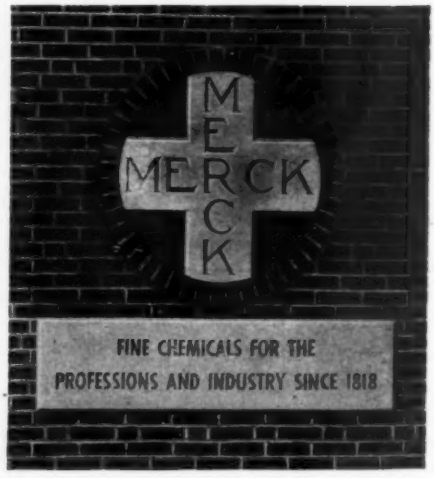
BUTOBEN (*n*-Butyl Parahydroxybenzoate Merck), an antiputrefactive and antifermentive agent, is an effective, nontoxic preservative in various preparations, and can, in most instances, be used in place of some of the preservatives which now may be unavailable.

BUTOBEN can be used in acid and neutral products, as well as in moderately alkaline media. It is economical because of the small quantity required (2/100 of 1%), *i.e.,* only 1 ounce is required to preserve 35 gallons of a preparation. Suggested uses are in gum solutions for hairwave setting, and various types of liquid preparations, including face and hand lotions, cosmetic creams, medicinal elixirs, tonics, certain eye lotions, and emulsions.

BUTOBEN, while an excellent preservative for the aqueous phase of cosmetics, does not prevent rancidity of oils and fats, as this is not caused by micro-organisms, but by hydrolysis and subsequent oxidation, and for which purpose an antioxidant is required.

As many cosmetic and medicinal preparations are composed of several ingredients, some of which may be incompatible with certain preservatives, we suggest that you consult the Merck Chemical Service Department regarding your manufacturing problems and requirements.

Samples of BUTOBEN will be supplied to manufacturers on request.



MERCK & CO., Inc. *Manufacturing Chemists* RAHWAY, N. J.

New York, N. Y. • Philadelphia, Pa. • St. Louis, Mo. • Elkton, Va. • Chicago, Ill. • Los Angeles, Cal.

In Canada: MERCK & CO. Limited, Montreal and Toronto

THE Heart OF YOUR COSMETIC IS Correct Perfuming . . .

Each subtle fragrance is rich and eloquent testimony to the inimitable creative skill of FELTON perfumers. Employ their art and their talent to your advantage.

FELTON CHEMICAL COMPANY, INC.

599 JOHNSON AVENUE, BROOKLYN, N. Y. *Branches in BOSTON · PHILADELPHIA · CHICAGO ST. LOUIS · NEW ORLEANS · LOS ANGELES · SAN FRANCISCO · MONTREAL · TORONTO · MEXICO CITY*

MANUFACTURERS OF PERFUMES, ESSENTIAL OILS, AROMATIC CHEMICALS AND FLAVORS

Parmantheme

A truly remarkable synthetic version of the natural Parma-Violet note!

This Chuit, Naef specialty embraces all the most desirable characteristics of the ideal Violet basic note. It is non-irritating—*contains no methyl heptine carbonate*—very fresh and tremendously powerful.

PARMANTHEME can be used in any type toilet preparation, being particularly effective in lipsticks, creams and perfume extracts.

Additional Data and Quotations on Request

Firmenich & Co.,

135 FIFTH AVE., NEW YORK • Chicago Office: 612 NORTH MICHIGAN AVE.

Fashion Forecast

POST WAR planners in the cosmetic industry look for a great fashion revival. They know that *Nail Enamel* will be in the lead in fashion cosmetics.

Durlin's laboratory and factory have been busy with war work and in giving every possible help to *Durlin* customers. But we have never lost sight of the great opportunities that new technical developments will open for cosmetic manufacturers in *Nail Enamel.*

It's never too early for planning. Be ready for an eager market on *Durlin Nail Enamel.*

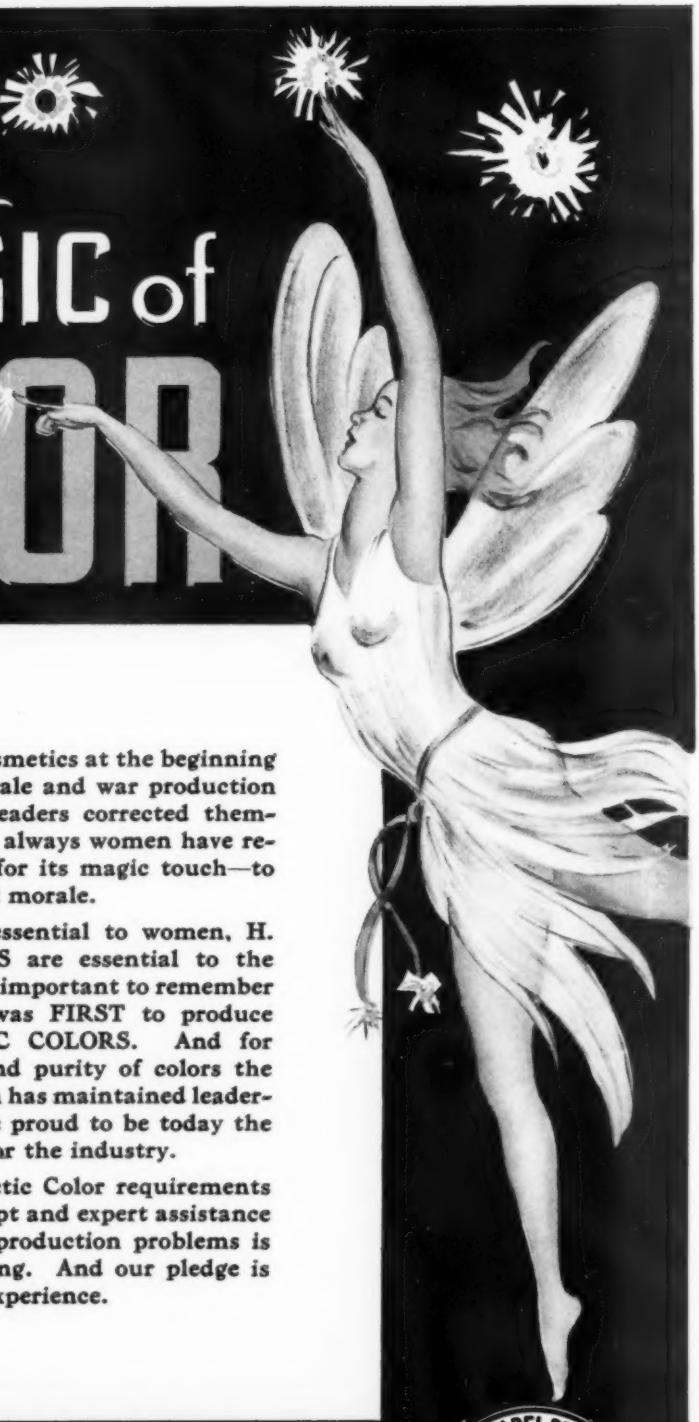
DURLIN CO.

Foremost Name in Bulk Nail Enamel

744 BROAD STREET NEWARK 2, NEW JERSEY

Science adds

the MAGIC of COLOR



England tried to ban cosmetics at the beginning of the war. When morale and war production dropped, government leaders corrected themselves. Everywhere and always women have relied on cosmetic color for its magic touch—to enhance beauty and lift morale.

As beauty aids are essential to women, H. KOHNSTAMM COLORS are essential to the cosmetic industry. It is important to remember that H. Kohnstamm was FIRST to produce CERTIFIED COSMETIC COLORS. And for strength, uniformity and purity of colors the House of H. Kohnstamm has maintained leadership ever since. We are proud to be today the chief source of supply for the industry.

Whatever your Cosmetic Color requirements may be, you'll get prompt and expert assistance here. Help with your production problems is yours, too, for the asking. And our pledge is backed by 94 years of experience.

H·KOHNSTAMM ESTABLISHED 1851 & COMPANY, INC.

- 89 PARK PLACE, NEW YORK
- 11-13 E. ILLINOIS ST., CHICAGO
- 4735 DISTRICT BLVD., LOS ANGELES

First Producers of Certified Colors

THE ATLAS LABEL PROTECTS YOU · STRENGTH · UNIFORMITY · PURITY · H. KOHNSTAMM & CO. INC. · NEW YORK · CHICAGO

ATLANTA · BALTIMORE · BOSTON · BUFFALO · CINCINNATI · CLEVELAND · DALLAS · DENVER · DETROIT · HOUSTON · INDIANAPOLIS
KANSAS CITY, MO. · MINNEAPOLIS · NEW ORLEANS · OMAHA · PHILADELPHIA · PITTSBURGH · ST. LOUIS · SAN FRANCISCO

no guesswork here!

***Dextrorotatory*-Calcium Pantothenate (Calco) is admittedly the ideal pantothenate for pharmaceutical use...**

• UNIFORMLY HIGH POTENCY

The *dextrorotatory* form is twice as potent as the racemic (dl) form.

• DEPENDABLE PURITY

It is easier to assay, and to control the purity of, the *dextrorotatory* form.

• EASY TO HANDLE

Dextrorotatory-Calcium Pantothenate (Calco) is an odorless, white, *crystalline* powder; it is free from hygroscopic difficulties; it requires only *one-half* of the "space" as the racemic; it is non-reactive with tablet and capsule excipients. These are worth-while advantages, especially in tablet manufacture.

• ECONOMY

The negligible difference in cost of the *dextrorotatory* form as compared to the less desirable racemic form, especially in view of the above advantages, is extra assurance that *dextrorotatory*-Calcium Pantothenate (Calco) is the PANTOTHENATE OF CHOICE.

Pharmaceutical Department
CALCO CHEMICAL DIVISION
AMERICAN CYANAMID COMPANY
BOUND BROOK Calco NEW JERSEY

New Products

Choline Chloride
Choline Dihydrogen Citrate

★

Ask, Also, About These Other Available CALCO Products

Sulfadiazine U.S.P. (and Sodium Salt)
Sulfapyridine U.S.P. (and Sodium Monohydrate)
Nicotinamide U.S.P.
Sulfanilamide U.S.P.
Sulfamerazine (and Sodium Salt)
Cinchophen N.F.
Neocinchophen U.S.P.
Sulfathiazole U.S.P. (and Sodium Monohydrate)
Mandelic Acid U.S.P.
Methylene Blue U.S.P. (Powder-Crystals)
Calcium Mandelate U.S.P.
Glutamic Acid HCL
Calcium and Sodium Pantothenate
Menadione U.S.P.
Phenothiazine (For Veterinary Use)
Certified Colors for Pharmaceutical and Cosmetic Use

ARMY E NAVY

BUILD FOR THE FUTURE!

DURING THE POST-WAR YEARS, if American business is to score a bull's eye, it will have to raise its sights to much higher levels of production. The difficult objective of reconversion will be accompanied by rapid and substantial expansion in civilian items. Therefore, you will be wise to make some definite plans now!

WHAT ARE YOUR NEW PRODUCTS TO BE?
Often, new products are a radical departure from your present line. They may be products you were tinkering with before the war. It requires only a bit of "imagineering" for you to determine your own possibilities.

EVANS CHEMETICS TRANSFORMS "IMAGINEERING" into present actualities. Although our facilities are largely concentrated on war production, we are prepared to carry your products from laboratory through to bulk manufacture, packaging and distribution. Today and after the war, our organization stands ready to serve your requirements.

EVANS CHEMETICS, INC.
250 East 43rd Street, New York
Telephone: Murray Hill 3-0077

EVANS CHEMICALS, LTD.
Boreham Wood, Herts, England
For your English post-war production

★ *(Manufacturing Chemists with Unique Research Facilities)* ★

BUY MORE WAR BONDS THAN BEFORE

GEORGE LUEDERS & CO.

NEW YORK

1885

ESSENTIAL OILS
PERFUMERS MATERIALS

GEORGE LUEDERS & CO NEW YORK
GL
REGISTERED TRADE-MARK

FACTORY PRODUCTS

OIL CLOVE, EUGENOL, OLIBANUM,
RHODINOL, CITRAL

427-429 WASHINGTON STREET - - - NEW YORK 13, N. Y.

BRANCHES

CHICAGO • SAN FRANCISCO • MONTREAL

REPRESENTATIVES

SAINT LOUIS — PHILADELPHIA
LOS ANGELES — TORONTO

HAVE YOU

AN UNSOLVED DISPERSION OR EMULSION PROBLEM?

Tell us what it is and let's see if we can solve it for you. Although young in business years we are old in experience and "know how". This advertisement has been prompted by surprising success (as often to ourselves as to our clients) in licking "knotty" or "can't be done" problems for some of the best names in the drug and cosmetic industries.

We are not miracle performers, but we appear to be sufficiently successful to warrant the suggestion that you ask us to go to work for you. The chances are that we have or can make for you the particular surface active, dispersing agent, emulsifier or combination you need to give the results wanted and hoped for but never quite attained.

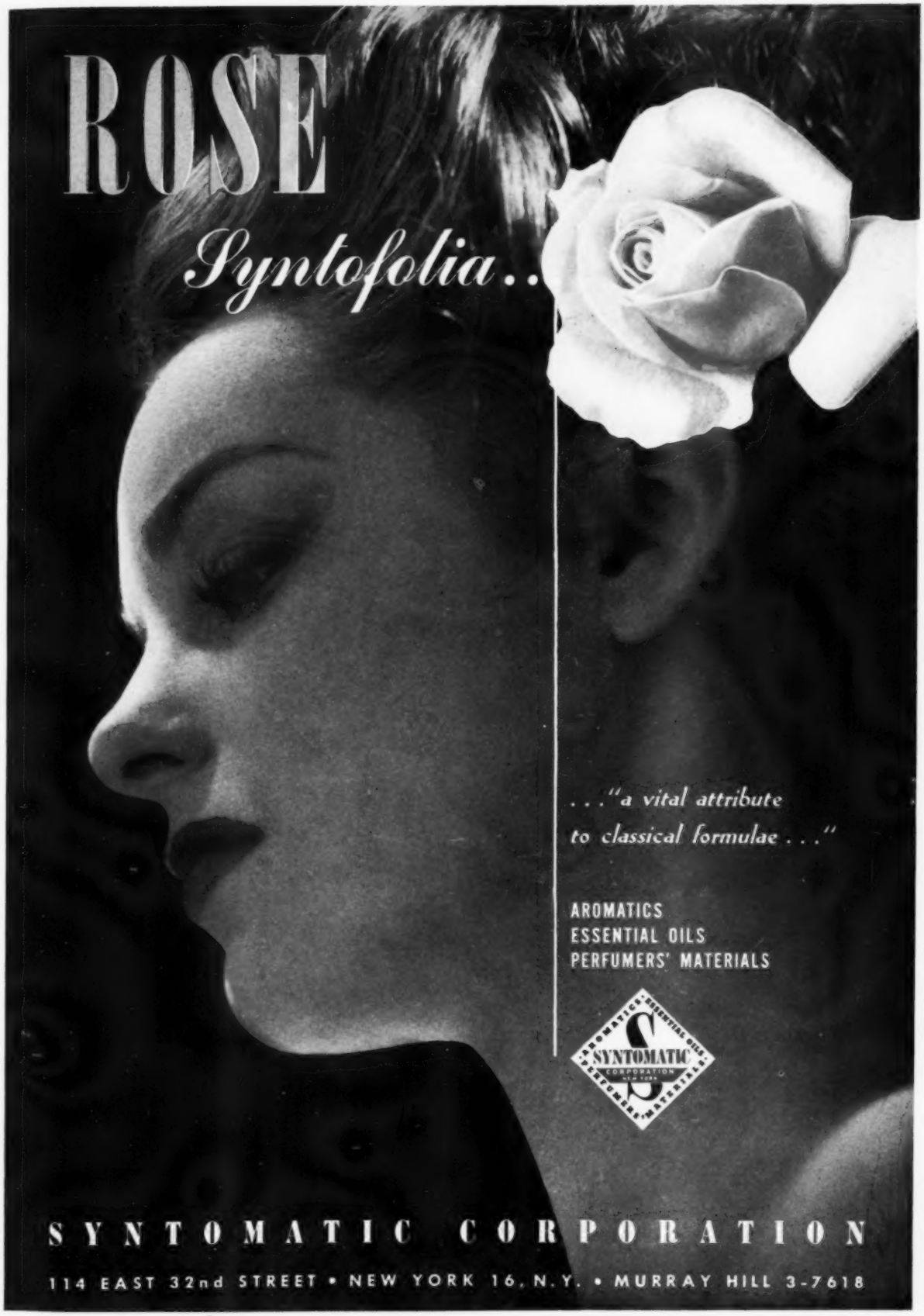
Simply tell us your basic problem which will be treated most confidentially, put it up to us to find the answer for you. No obligation is involved in taking advantage of this offer.

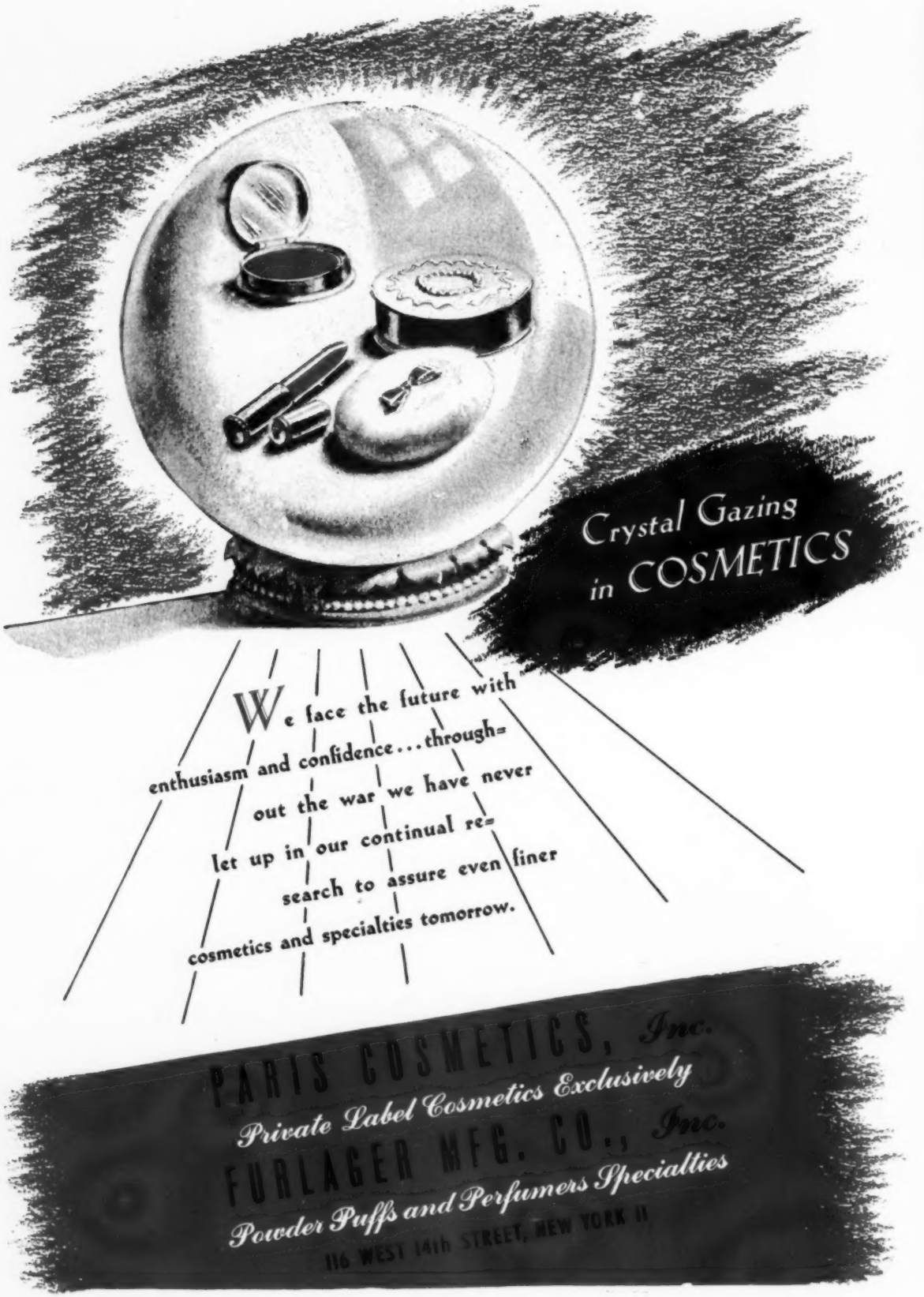
THE DISPERGENT CO.

1 East 53rd Street

New York 22, N. Y.

SPECIALISTS IN CUSTOM BUILT EMULSIFIERS, DISPERSING AND SURFACE ACTIVE AGENTS


ROSE
Syntofolia..
. . . "a vital attribute
to classical formulae . . ."
AROMATICS
ESSENTIAL OILS
PERFUMERS' MATERIALS
SYNTOMATIC
CORPORATION
SYNTOMATIC CORPORATION
114 EAST 32nd STREET • NEW YORK 16, N.Y. • MURRAY HILL 3-7618


Crystal Gazing
in COSMETICS
We face the future with
enthusiasm and confidence... through-
out the war we have never
let up in our continual re-
search to assure even finer
cosmetics and specialties tomorrow.
PARIS COSMETICS, Inc.
Private Label Cosmetics Exclusively
FURLAGER MFG. CO., Inc.
Powder Puffs and Perfumers Specialties
116 WEST 14th STREET, NEW YORK 11

Totaquine U.S P

And Other Cinchona Alkaloids

American manufacture of Totaquine, U.S.P., for use in antimalarial therapy, is replacing the diminishing supply of Quinine . . . As outstanding manufacturers of Cinchona Alkaloids, we invite your inquiries for all Cinchona derivatives, including Cinchonidine, Cinchonine, and Quinidine.

Supplies are owned by the Government, and are released for distribution by us to consumers after monthly allocation by the War Production Board.

Alkaloids, Glycosides, Plant Principles and Other Basic Medicinals

Aconitine, Amorphous
Aconitine, Crystals U.S.P. X
Allantoin
Aloin, U.S.P.
Ammoniated Glycyrrhizin
Arecoline Hydrobromide. N.F.
Asparagin
Atropine Alkaloid, U.S.P.
Atropine Sulphate, U.S.P.
Berberine Acid Sulphate
Berberine Hydrochloride
Berberine Sulphate
Brucine
Brucine Sulphate
Chrysarobin, U.S.P.
Cinchonidine
Cinchonine
Colchicine, U.S.P.
Colchicine Salicylate
Diethylstibestrol, U.S.P. (Synonym: Stilbestrol)
Diethylstibestrol Dipropionate
Digitalin (so-called German) N.N.R.
Digitonin
Elaterium
Emetine Alkaloid
Emetine Bismuth Iodide
Emetine Hydrochloride, U.S.P.
Ephedrine Alkaloid, U.S.P., (Natural)
Ephedrine Hydrochloride, U.S.P., (Natural)
Ephedrine Sulphate, U.S.P., (Natural)
Eserine Alkaloid
Eserine Salicylate U.S.P.
Eserine Sulphate, U.S.P., VIII
Gynestrol (Natural Estrogenic Substance)
Helenin
Hexestrol
Histidine
Histidine monohydrochloride
Homatropine Alkaloid
Homatropine Hydrobromide, U.S.P.
Homatropine Hydrochloride
Homatropine Sulphate
Hydrastine Alkaloid, U.S.P., IX
Hydrastine Hydrochloride, N.F.
Hydrastine Sulphate
Hyoscine Hydrobromide, U.S.P.
Hyoscine Hydrochloride
Hyoscyamine Alkaloid
Hyoscyamine Hydrobromide, U.S.P. X
Hyoscyamine Sulphate
Jalap Resin, N.F.
Lobeline Sulphate
Ouabain (Strophanthin-G), U.S.P.
Physostigmine
Picrotoxin, U.S.P.
Pilocarpine Alkaloid
Pilocarpine Hydrobromide
Pilocarpine Hydrochloride, N.F.
Pilocarpine Nitrate, U.S.P.
Pilocarpine Salicylate
Pilocarpine Sulphate
Podophyllin, N.F.
Quassin
Quinidine
Quinine
Sanguinarine
Sanguinarine Nitrate
Sanguinarine Sulphate
Santonin
Saponin Depurated
Scammony Resin, N.F.
Scopolamine Hydrobromide, U.S.P.
Sparteine
Sparteine Camphosulphonate
Sparteine Sulphate, N.F.
Strophanthin-G (See Ouabain)
Strophanthin-K, U.S.P., XI
Strychnine
Totaquine, U.S.P.
Veratrine
Veratrine Hydrochloride
Yohimbine Hydrochloride

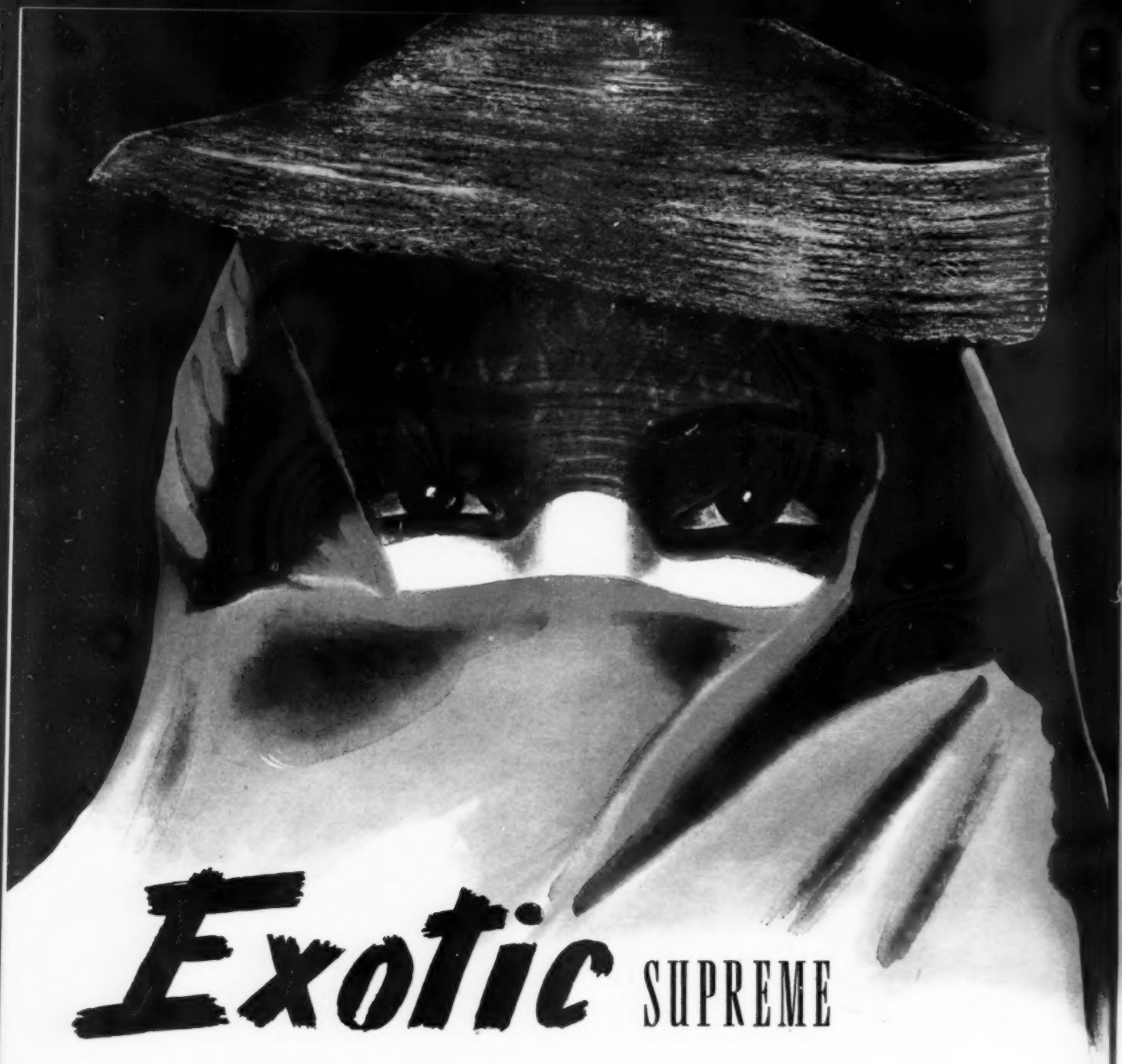
S. B. PENICK & COMPANY

50 Church Street, New York 7, N. Y. Telephone: COrtlandt 7-1970

735 W. Division Street, Chicago 10, Ill. Telephone: MOHawk 5651

Buy War Bonds and Stamps — For Victory

ALKALOID EXTRACTING MANUFACTURERS



Exotic SUPREME

...capturing for your practical needs...in this superb interpretation of its subtle fragrance...the mystery of the exotic mood...

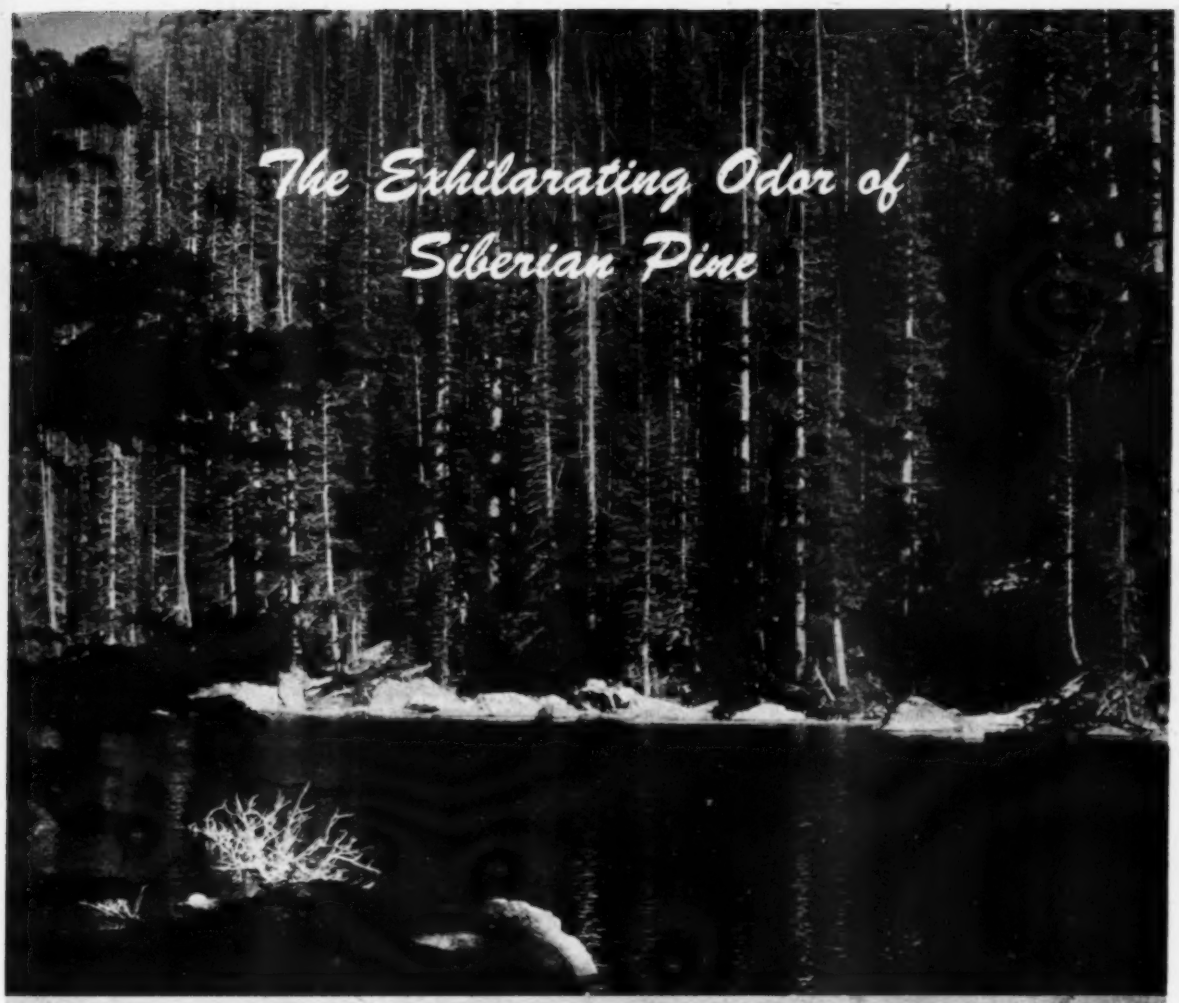
FLORASYNTH'S **Exotic** SUPREME

...delicate appeal...amazing practical application...An essence supreme...

Florasynthetics
for faithful
FLORAL REPRODUCTIONS
JASMIN • BERGAMOT • LAVENDER
and others...
Established Essentials!

Florasynth LABORATORIES, INC.
CHICAGO 6 · NEW YORK 61 · LOS ANGELES 27

DALLAS 1 • DETROIT 2 • MEMPHIS 1 • MINNEAPOLIS 2 • NEW ORLEANS 13 • ST. LOUIS 2 • SAN FRANCISCO 3 • SEATTLE 4
Florasynth Labs. (Canada) Ltd. — Montreal • Toronto • Vancouver • Winnipeg Florasynth Laboratories de Mexico S. A. — Mexico City



Reproduced in the MM&R Laboratories

OIL PINE SIBERIAN
REPLACEMENT MM&R

Testing Sample and Schedule of Attractive Prices on Request

MAGNUS, MABEE & REYNARD, INC.

SINCE 1895... ONE OF THE WORLD'S GREATEST SUPPLIERS OF ESSENTIAL OILS

16 DESBROSSES STREET, NEW YORK CITY • 221 NORTH LaSALLE STREET, CHICAGO

San Francisco: Braun-Knecht-Heimann Co. • Los Angeles: Braun Corp. • Seattle, Portland, Spokane: Van Waters & Rogers, Inc. • Canada: Richardson Agencies, Ltd., Toronto

NAUGATUCK

Perfume Compositions

NAUGATUCK . . . . NEW YORK

QUALITY COSMETICS

made better with

SONNEBORN

White Oils and Petrolatums

Leading cosmetic manufacturers have long standardized on SONNEBORN White Oils and Petrolatums . . . convincing evidence of the unsurpassed Quality, Purity and Stability of these highly refined ingredients.

A few of the end-uses of successful products containing SONNEBORN White Oils or Petrolatums are illustrated. There are many others.

The broad research facilities of the SONNEBORN laboratories, backed by 64 years of refining experience, are available for aid in current production problems and in the development of new cosmetics for postwar markets.

HAIR TONICS

OILY NAIL POLISH REMOVER

LIPSTICKS AND ROUGES

BRUSHLESS SHAVE CREAM

BRILLIANTINES

SOAPS

EYE-MAKEUP

COLD CREAMS AND CLEANSING CREAMS

HAND LOTIONS

SUNTAN CREAMS AND OILS

HAIR POMADES

SPECIAL SKIN CREAMS

WHITE MINERAL OILS

KAYDOL U. S. P. Heavy · ORZOL U. S. P. Heavy · PURITAN U. S. P. Heavy

ERVOL U. S. P. Light · BLANDOL U. S. P. Light

CARNATION · KLEAROL

PETROLATUMS U. S. P.

TYPE I: *Medium Consistency—White Protopet—Yellow Protopet and other colors*

TYPE II: *Soft Consistency — White Fonoline — Yellow Fonoline*

TYPE III: *Medium Consistency With High Melting Point —White Perfecta*

SPECIALTIES

SONO-JELL— Complete series for liquefying cleansing creams, pomades, ointments, etc.

DEO-BASE— Light hydrocarbon distillate refined to complete freedom from kerosene odor.

TRI-OL— Base for soapless oil shampoos and base for soap-sensitive skin cleansers.

WHITE OIL DIVISION

L. SONNEBORN SONS, INC.

88 Lexington Avenue, New York 16, N. Y. • Refineries: Petrolia and Franklin, Pa.

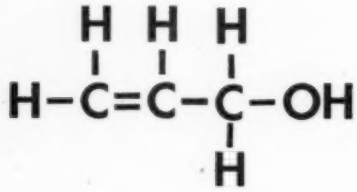
Southwestern Distributors: Sonneborn Bros., Dallas, Texas

Branch Offices: Chicago, Baltimore, Philadelphia and Los Angeles — Stocks Carried in Principal Cities

CARBIDE AND CARBON CHEMICALS CORPORATION

Announces Commercial Production of

Allyl Alcohol



Useful Raw Material for Synthesis

Vitally needed for war production, Allyl Alcohol is now available in commercial quantities from Carbide and Carbon Chemicals Corporation at prices that make it an important intermediate in industrial chemical synthesis.

Although most of the production of Allyl Alcohol is for high-priority uses, it is expected that substantial amounts will now be available for new users and for expanded consumption by those already using this chemical.

PHYSICAL PROPERTIES

Molecular Weight	58.05
Boiling Point	96.9°C. at 760 mm.
Vapor Pressure	17.3 mm. at 20°C.
Flash Point (open cup)	85°F.
Specific Gravity 20°/4 °C.	0.8520
Weight per gal.	7.11 lb. at 20°C.
Water Solubility	Complete

Since it has both a reactive, unsaturated linkage and a hydroxyl group, it has unusual applications as a chemical raw material. It can be converted to acrolein, propionaldehyde, glycerin chlorhydrins, or glycerin itself.

Allyl Alcohol forms esters which can be polymerized alone or with other materials to form resins characterized by great clarity, surface hardness, and ease of fabrication at low pressures. Certain allyl esters are used in perfumes, flavors, and as pharmaceutical intermediates. Allyl halides made from Allyl Alcohol are used for introducing the allyl group into barbiturate sedatives. The halides are also intermediates in the synthesis of the anesthetic cyclopropane.

Write for samples and the latest information on the availability and uses of this versatile chemical.

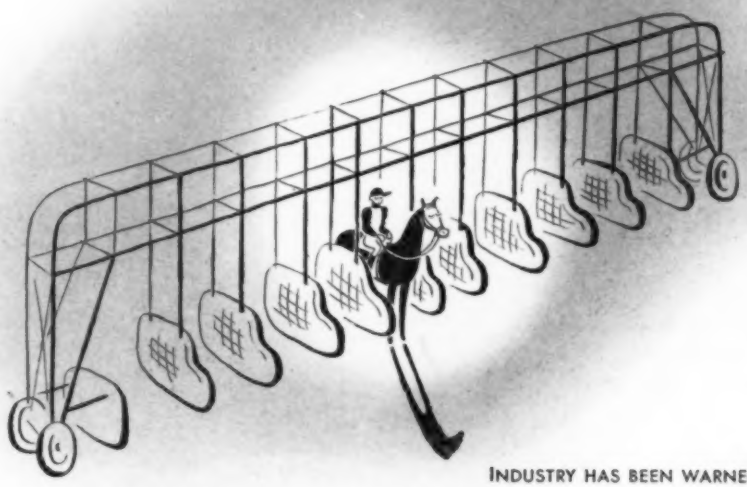
CARBIDE AND CARBON CHEMICALS CORPORATION

Unit of Union Carbide and Carbon Corporation

30 East 42nd Street UCC New York 17, N. Y.

PRODUCERS OF SYNTHETIC ORGANIC CHEMICALS

DONT BE LEFT AT THE POST-WAR PLANNING



INDUSTRY HAS BEEN WARNED by Jesse Jones, U. S. Secretary of Commerce, that the war may end suddenly and business should, therefore, be preparing now for the Post-war period.

The Committee for Economic Development reports that cessation of hostilities in Europe will release 80% of the nation's war production capacity for reconversion for civilian use.

Mr. Jones' warning and the report of the Committee for Economic Development should serve as a double spur to all Post-war thinking. When restrictions are lifted from war-prioritied cosmetic ingredients, don't be caught flat-footed and left at the post.

The merchandising, packaging and production experience and facilities of Allied Products may be a source of guidance at this time for the all-important, fast get-away and quick sales pick-up when war production barriers are raised. Arrangements for consultation can be made at your convenience, and without obligation, at your office or at the Allied Office in the R.C.A. Building in New York City.

ALLIED PRODUCTS INC.

30 ROCKEFELLER PLAZA, N.Y.C.

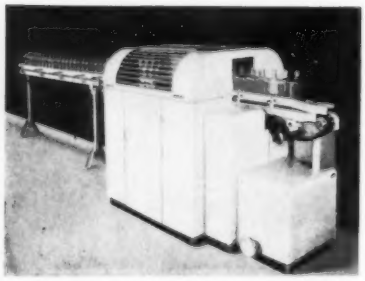
PRIVATE BRAND SPECIALISTS • MAKERS OF THE WORLD'S FINEST COSMETICS AND TOILETRIES

Plant and laboratories • Suffern, New York • 1015 St. Alexander St., Montreal, Quebec

LOWER COST PER CONTAINER

SLOGAN of Importance to 135,000,000 AMERICANS

When automatic Pneumatic Machinery reduces the packaging cost of products running to millions of packages annually, this has a most favorable effect on millions of American homes.



INVERTED AIR CLEANER—*Bottles automatically turned upside down and subjected to an internal blast of filtered, dry air at 60 lbs. pressure. Guarantees the removal of all dust, lint and foreign matter found in new glassware.*

Likewise to the alert management of a manufacturer of packaged goods, economical production resulting from *lower cost per container*, is of prime importance.

Pneumatic's long-time objective is, and always has been, improved packages and higher machine efficiency. THAT IS WHY, today as in peace time, Pneumatic Packaging & Bottling Equipment continues to serve the manufacturers of leading national brands throughout the country.—Pneumatic Scale Corporation, Ltd., 70 Newport Ave., North Quincy 71, Massachusetts. Branch Offices: New York 6, Chicago 1, San Francisco 11, Los Angeles 13

PNEUMATIC

PACKAGING & BOTTLING MACHINERY

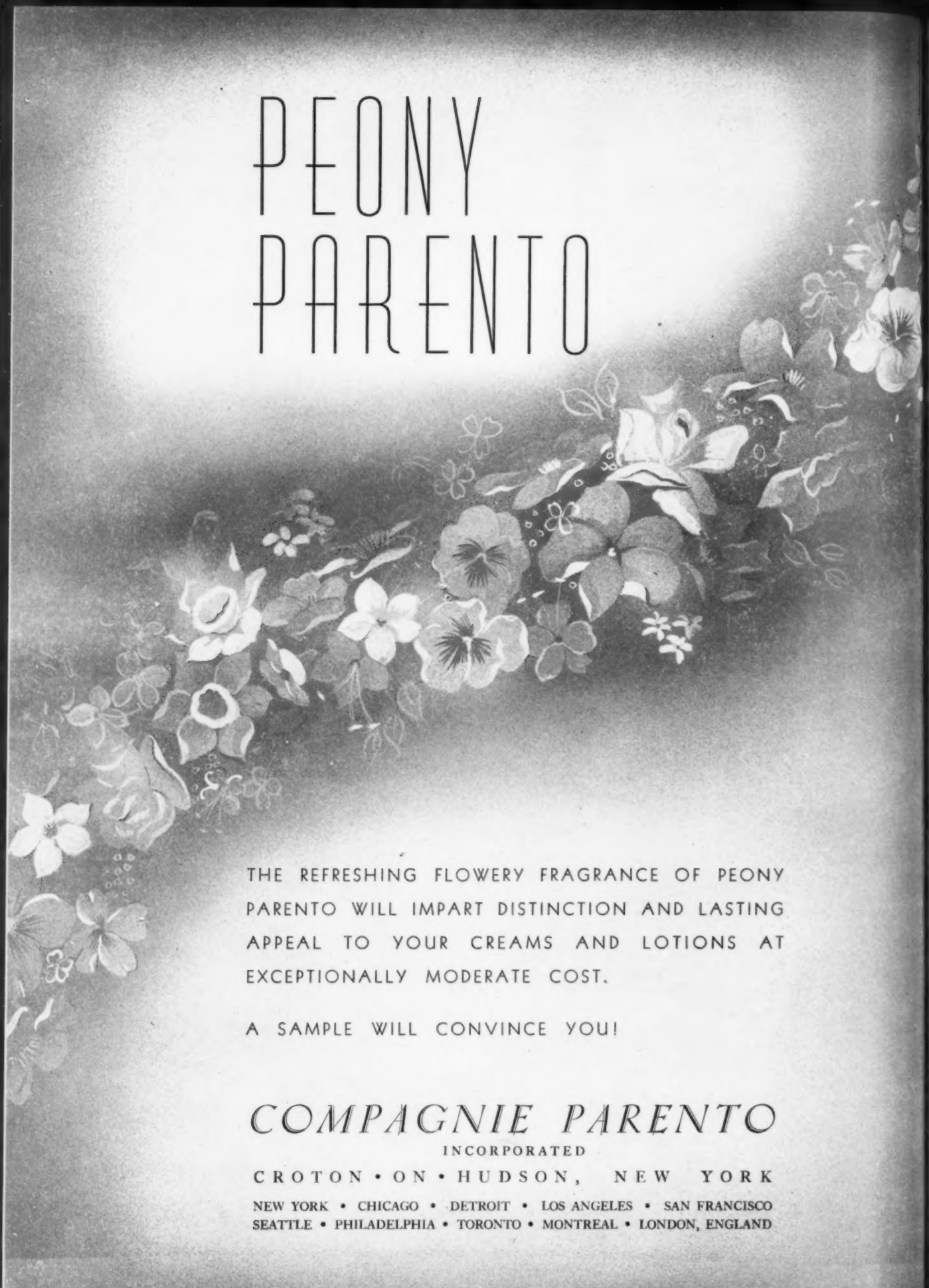
Keep that familiar fragrance

As matching odors becomes increasingly difficult, manufacturers are leaning more and more on aromatics research. Perhaps you can match the important odor of your product with the aid of Du Pont chemists. E. I. du Pont de Nemours & Co. (Inc.), Organic Chemicals Dept., Aromatics Section, Wilmington, Del.

du pont aromatics

BETTER THINGS FOR BETTER LIVING
...THROUGH CHEMISTRY

DU PONT
REG. U.S. PAT. OFF.



THE REFRESHING FLOWERY FRAGRANCE OF PEONY PARENTO WILL IMPART DISTINCTION AND LASTING APPEAL TO YOUR CREAMS AND LOTIONS AT EXCEPTIONALLY MODERATE COST.

A SAMPLE WILL CONVINCE YOU!

COMPAGNIE PARENTO

INCORPORATED

CROTON • ON • HUDSON, NEW YORK

NEW YORK • CHICAGO • DETROIT • LOS ANGELES • SAN FRANCISCO
SEATTLE • PHILADELPHIA • TORONTO • MONTREAL • LONDON, ENGLAND

HIGH FASHION COLORS

On the lips of the most beautiful women in the world

certified

COSMETIC COLORS

for LIPSTICK
ROUGES
NAIL POLISHES
INORGANICS
TITANIUM DIOXIDE

"Inquiries solicited"

Ansbacher-Siegle
CORPORATION
Manufacturers of Fine Chemical Pigment Colors
General Offices, Works and Laboratories
ROSEBANK, STATEN ISLAND, NEW YORK, N. Y.
Boston, Chicago, Los Angeles, Cleveland, Detroit, San Francisco
Richmond, Toronto, Can.

INDOLINE

Not a substitute for INDOL but a product superior in

LASTING QUALITY
SWEETNESS and
PERFUME VALUE

Please Write for Free Sample

Norda

ESSENTIAL OIL AND CHEMICAL COMPANY, INC.

NEW YORK OFFICE
601 WEST 26TH STREET

CHICAGO: 325 W. HURON STREET
LOS ANGELES: 2800 E. 11TH STREET
ST. LOUIS: 1123 WASHINGTON AVE.
FRANCE: PLACE VENDOME, 8, PARIS
ST. PAUL: 253 E. 4TH STREET
HAVANA, CUBA: AMARGURA 160
CANADA: 119 ADELAIDE ST., W. TORONTO
135 COMMISSIONERS ST., WEST, MONTREAL
ENGLAND: 17 CREECHURCH LANE, LEADENHALL ST., LONDON, E. C. 3

Staff Allen's English Distilled Oils

Character, experience and ability in the important matter of producing Quality Oils

STAFFORD ALLEN & SONS LTD.,
LONDON ENGLAND

CLOVE
LAVENDER
NUTMEG
ORRIS
PATCHOULY
PEPPERMINT
SANDALWOOD

BRITAIN DELIVERS THE GOODS

UNGERER & CO.

161 SIXTH AVE., NEW YORK
Philadelphia Boston San Francisco Chicago

MORE FOR THE BATTLE FRONT... LESS FOR THE HOME FRONT

"No soldier in the world, whether he is in the armies of our allies or our enemies, receives better medical attention, on and off the battlefield, than the man who fights for America." Surgeon General, U. S. Army

Into the manufacture of the vast quantities of ointments, salves, lotions, creams and similar products needed by the Medical Corps go great quantities of Lanolin U.S.P.

To be certain that war needs are met first, Lanolin, Degras and other grades of Wool Grease have been placed on allocation.

Some manufacturers have been asked to do without or with less Lanolin and Wool Grease so that it can be used for this and many other vital war purposes to help hasten the day of victory. The sooner it comes, the faster you can have all the Nimco Brand Lanolin, Degras and Wool Grease you want.

MALMSTROM NIMCO BRAND LANOLIN

Lanolin and Wool Greases
HELP FIGHT FOR VICTORY
PRACTICE CONSERVATION
of Essential Materials
AND SUPPORT THE FIGHT

N. I. MALMSTROM & CO.

America's Largest Suppliers of { **LANOLIN** • Anhydrous U.S.P. • Hydrous U.S.P. • Absorption Base • Technical
DEGRAS • Neutral and Common • Wool Greases

147 LOMBARDY STREET • BROOKLYN, NEW YORK

FOR OVER 145 YEARS...

The D&O trademark has been recognized as a symbol of creative ability and the highest quality standards in the field of aromatics and essential oils.

WE INVITE YOU TO SUBMIT YOUR PERFUMING PROBLEMS TO OUR COMPETENT COMPOUNDING LABORATORIES.

DODGE & OLCOTT COMPANY

180 VARICK ST., NEW YORK • BOSTON, CHICAGO, PHILADELPHIA, ST. LOUIS, LOS ANGELES • Plant & Labs., BAYONNE, N. J.

An Open

Letter TO THE PERFUME, COSMETIC AND SOAP INDUSTRIES

GIVAUDAN-DELAWANNA, INC.
330 WEST 42ND STREET
NEW YORK 18, N.Y.

ASSOCIATED WITH
L. GIVAUDAN & CIE.

FACTORY
DELAWANNA, N.J.

The encouraging developments in recent weeks, we feel, permit us to say without undue optimism, that for the first time a clear light is shining through on the path to peace. Should the present favorable situation continue, it is to be expected that some of the raw materials which have restricted our production and development will become available and certain of our aromatic materials will return to normal trade channels. As military needs decrease, our sources of heretofore scarce products will become more abundant.

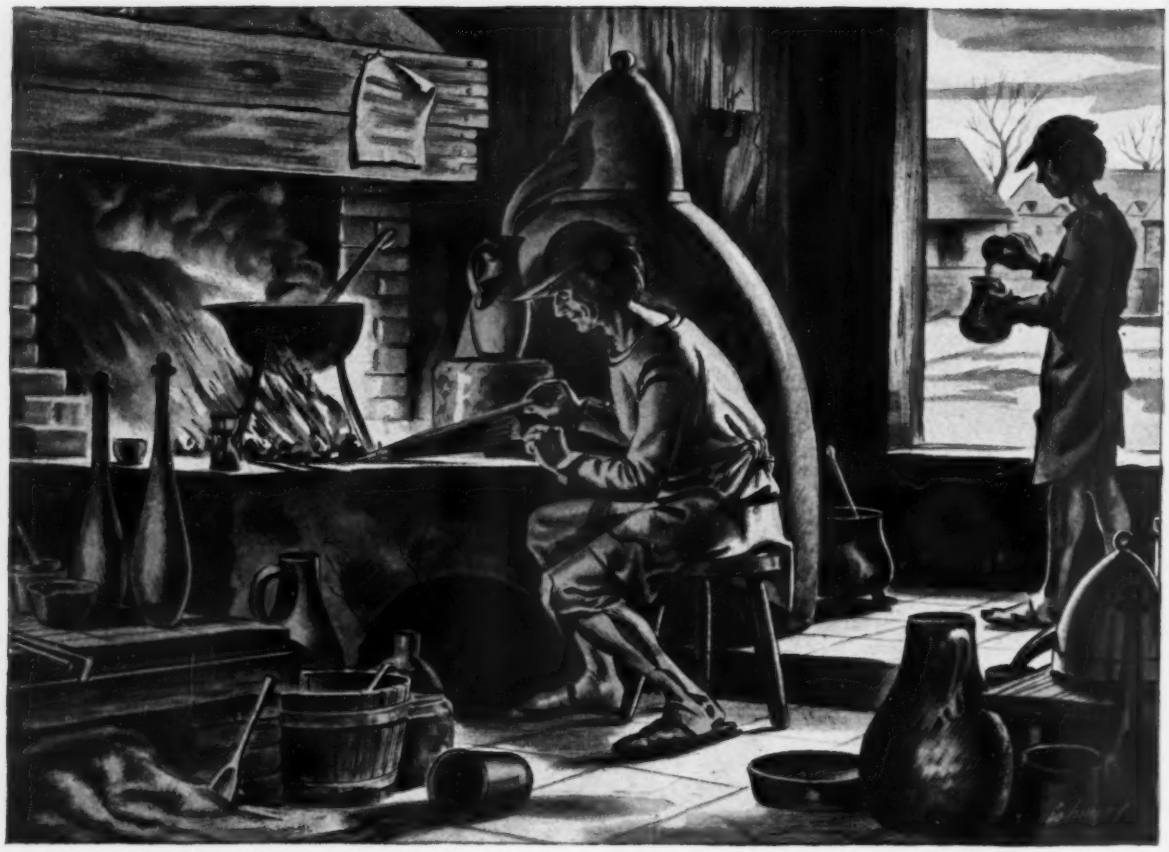
Considering this, and the imminence of a return to normal business procedure, Givaudan offers a special service to assist in the practical realization of plans for the production of postwar products.

We extend the cooperation of our research laboratories and the assistance of our technical staff in preparing and testing new formulas and adapting materials for special postwar uses. Both our skill and our already extensive experience has been increased by the work of the last few years, which in many cases has been extremely exacting.

As Givaudan has consistently led in the past, so it will continue to lead in the future through the discovery and development of better materials for the perfume, cosmetic and soap industry. We invite you to take advantage of the cooperation we offer.

Sales Manager

BUY WISELY...BUY GIVAUDAN



Potash and Smoke

ASKED how much smoke would be produced by the burning of 1,000 pounds of wood, Demonax, of Cyprus, answered: "Weigh the ashes! The missing weight has escaped as smoke." Ancient Greek writings reveal that this 2nd Century philosopher knew well the alkaline properties of wood and plant ashes (potash).

Alkaline plant ashes were included in the earliest Persian Pharmacopeia (975 A.D.) as well as the Arabian Canon of Medicine (about 1000 A.D.). But it was not until Sir Humphry Davy in 1807 isolated potassium that the true composition of potash became known. Later, with the exploitation of the Stassfurt salt mines, the door was opened to the vast commercial production of potassium salts for medicine, pharmacy and chemistry.

For 77 years MALLINCKRODT CHEMICAL WORKS have produced potassium salts of QUALITY IN QUANTITY. During this time more than 125 standardized and special salts, including the Acetate, Bicarbonate, Borate, Bromide, Citrate, Gluconate, Iodate, Iodide, Metabisulfite, Oxalate, Phosphate, Sulfate and Sulfite, have been of service to chemical users.

MALLINCKRODT CHEMICAL WORKS

FOR VICTORY BUY UNITED STATES WAR BONDS STAMPS

77 Years of Service to Chemical Users

Mallinckrodt Street, St. Louis 7, Mo. • 74 Gold Street, New York 8, N. Y.

CHICAGO • PHILADELPHIA • LOS ANGELES • MONTREAL

"You won't get a word in edgewise, all he talks about is socialized medicine."

KEEPING POSTED

Quinacrine Preferred in Malaria

FROM the report of the Board for the Coordination of Malarial Studies it now appears that quinacrine (atabrine) is to be preferred over quinine in the treatment of malaria. The report states:

"Quinacrine has proved to have all the antimalarial properties ascribed to quinine in the suppression of malaria during and subsequent to exposure to infected mosquitoes. Effective suppression can be accomplished over long periods of time by proper use of quinacrine. Available evidence indicates that this end may be achieved without danger to the individual.

"Earlier reports indicated a significant incidence of gastro-intestinal disturbances in certain groups of men receiving suppressive quinacrine therapy. For practical purposes these adverse reactions can be avoided by proper administration of the drug. Quinine, in doses adequate to assure suppression of malaria equivalent to that produced by quinacrine in the dosage currently used by the armed forces, is frequently attended by symptoms of cinchonism.

"Experience in the past two years has demonstrated conclusively that quinacrine when properly administered is fully as effective as quinine in the termination of the acute attack and is safer than quinine. The intramuscular injection of quinacrine is highly effective in securing a rapid therapeutic response.

"Because of its content of crystallizable cinchona alkaloids, totaquine USP has activity which approximates that of quinine and therefore can be used as a substitute for quinine when given orally. The antimalarial activity of totaquine USP is dependent upon the amount of crystallizable alkaloids in the preparation rather than on the specific amount of each individual alkaloid. Gastro-intestinal disturbances occur more frequently following the use of totaquine USP than they do following the use of quinine or quinacrine.

"On the basis of the foregoing statement, it is resolved:

"1. That no advantage and possible disadvantage, would accrue to the armed forces were quinine or totaquine to replace quinacrine for the routine suppression and treatment of malaria.

"2. That the large scale production of quinine or totaquine is not now considered a matter of importance for the management of malaria among Army and Navy personnel. It is possible that a supply of totaquine in excess of the present stockpiles may be required for therapy in civilian populations temporarily under the jurisdiction of the armed forces in occupied territory where immediate dissemination of information concerning the use of quinacrine is not practicable. In this connection it should be kept in mind that after the war the overall need for all established antimalarial drugs will continue to be great."

Certainly it appears that the end of the Dutch quinine monopoly has arrived. And it has arrived not by synthesis of quinine and not by the cultivation of cinchona trees in places other than Java. Rather has it occurred through proper attention being given to the use of a product that was already available but not considered worth trying. With the present large scale production of quinacrine in this country, the cost of treatment of malaria with quinacrine is now far below the cost of this treatment with quinine at pre-war prices.

His Lordship, the Druggist

WE GOT a big kick out of a statement made by Lord Trent, owner of the Boots chain drug stores in England, in the course of a debate on employment policy in the House of Lords. His Lordship is quoted as follows:

"My own firm could, had we wanted, during the last twenty years, have put the whole of the chemists trading in this country out of business, but it would not have been right and would not have helped employment. It is a thing you just do not do."

One can imagine the reaction of the independent retailers to this statement. The "Chemist and Druggist" of London has been having a field day publishing letters from retailers in answer to Lord Trent's statement. We think that perhaps his Lordship needs a ghost writer to prepare his remarks, for certainly he should not be allowed to speak extemporaneously.

Surplus Material Personnel

THE U. S. Treasury is building up its personnel for the disposal of surplus materials. Ernest L. Olrich, assistant to the Secretary of the Treasury, in Charge of Procurement and Surplus, has appointed three deputy directors to assist him with the operation of the Office of Surplus Property. Mr. Olrich says that the Treasury is bringing into the picture top-notch men from industry, all experts in their respective fields, and in whom business and industry can have utmost confidence as to their ability to distribute billions of dollars worth of consumer goods through regular trade channels.

The three men appointed are: Russell C. Duncan, Deputy Director in Charge of Merchandising and Sales; he is president of R. C. Duncan Company, distributors of industrial hardware, Minneapolis; he has served as president of the National Supply and Machinery Distributors Association, and has held executive positions in other national and civic organizations; he has served as a dollar-a-year man with the Government for the past three years including WPB and OPM. Frederick R. Atcheson, Deputy Director in Charge of Operations, is comptroller of Marshall Field & Company, Chicago department store; he is past chairman of the Comptrollers' Association of Chicago. Albert W. Frey, Deputy Director in Charge of General Trade Relations, Industry Advisory Committee, Publicity, Research and Personnel, is author of books on merchandise control and other business subjects and has acted as business consultant; He was Professor of Marketing at Amos Tuck School of Business Administration, Dartmouth College, from 1921 to 1944 and is now on leave of absence.

Director Duncan will be in charge of establishment of policies governing transfers, sales, loans, and rentals, exhibits and displays, circularization of governmental agencies and rehabilitation of surplus property. Director Acheson will have charge of coding and classification, pricing, inventory control, commodity reports, warehousing, transportation, traffic, appraisal, administrative and fiscal functions. Director Frey will have charge of personnel, contacts with and establishment of working arrangements with Industry Advisory Committees, trade relations, publicity, research and planning and all matters concerning relations with other government agencies.

Lactic Acid Insufficient

LACTIC acid is now in insufficient supply and was placed under allocation control as of September 1, under Order M-300 of WPB. Uses of lactic acid listed by WPB are flavoring of soft drinks and foods such as jams, jellies, pickles, olives, ice cream, sherbet; production of pharmaceutical and medicinals; cleaning, sterilization and processing of textiles; tanning of leather; production of lactates used in plastics. Attempts are being made to increase production by improving facilities and techniques. War Food Administration is cooperating by efforts to supply additional war materials such as corn starch, corn syrup, whey and high grade molasses used in manufacture of lactic acid.

It is interesting to note in connection with this control of lactic acid, that this product has been found to be a corrosive poison. In the "Journal of the American Medical Association" of August 26, Drs. E. Gordon Young and Ralph P. Smith, of Halifax, N. S., report on three fatal cases. The deaths were three premature infants following the administration of an acid milk containing an excess of lactic acid.

Vitamins Bought By the Government

VITAMINS purchased during the first six months of this year for Lend-Lease, territorial emergency, Red Cross, and other purposes are as follows: ascorbic acid powder, 2,331,968 ounces; ascorbic acid tablets, 39,038,013; fish liver oil (vitamin A), 10,776,005 M units; ketagulonic acid, 7,000 kilograms; multi-vitamin tablets, 1,520,236,000; nicotinamide, 37,604 kilograms; nicotinic acid, 42,106 pounds; riboflavin, 140,000 grams; sorbose, 80,900 pounds; thiamine hydrochloride, 5,080 kilograms.

During the same period, shipside deliveries for Lend-Lease were: carotene, 138,124 M/U; diacetone gulosonic acid, 13,226 pounds; multi-vitamin tablets, 242,713 pounds; nicotinic acid, 2,540 pounds; riboflavin, 396 pounds; sorbose, 36,180 pounds; vitamin A fish liver oil, 5,230,621 M/U; vitamin B_1, 113 pounds; ascorbic acid powder, 48,620 pounds; ascorbic acid tablets, 2,611,000; vitamin D, 705 pounds; vitamin A and D, 3,585,833 M/U; nicotinamide, 23,999 pounds—as well as cash sales of 37,923,751 ascorbic acid tablets, and 7,185 M/U of fish liver oil to claimant agencies.

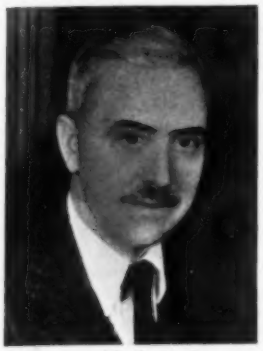
Ergot in Australia

AS DRUG manufacturers well know, the essential drug ergot is a fungus that grows on rye. As did other countries of the world which were cut off from normal supplies of drugs due to the war, Australia had to produce her own ergot among other medicinal products. But Australian rye is of a particularly clean variety and does not produce ergot normally, and therefore it had to be artificially infected. Chemists of the Council of Scientific Research adapted the flotation process used in mining to separate the ergot from the rye. Because of the effectiveness of this process, almost enough ergot of a superior grade is being derived to meet domestic requirements.

Nine Vitamins—Nine Minerals

NORWICH Pharmacal Company is marketing a new tablet containing nine vitamins and nine minerals. The vitamins in the product are A, B_1, C, D, G, B_6, E, Niacin Amide, and Pantothenic Acid, and the minerals are Calcium, Phosphorous, Iron, Iodine, Copper, Manganese, Magnesium, Zinc, and Cobalt, plus a source of all the B Complex factors. Dr. Henry E. Paul, who developed the product for Norwich, says that the problem of stabilization was a most difficult one to overcome since many of the vitamins and minerals are incompatible with each other. The name of the product is Erosyn, and it sells at a list price to the consumer of $1.60 for 100 tablets, with a Fair Trade minimum of $1.49.

Medical Care for Government Employees



A BILL to provide industrial medical service for all Federal employes, which now number about 2,700,000, was recently endorsed by officials of the Federal Government and a representative of the American Medical Association at hearings before the House District Committee. U. S. Public Health Service Surgeon General Thomas Parran said that the contemplated services would include a good pre-placement examination, including chest X-ray for tuberculosis, minor medical and dental care, minor care for emotional disturbances, a nutritional effort, checks on environmental factors such as bad lighting which causes headaches, studies of records of absenteeism, control of contagion and infection, and some routine care in pregnancy. The plan, he said, would cost less than one per cent per day per public employe, and it would be administered by the Civil Service Commission in consultation with the U. S. Public Health Service and in close cooperation with agency heads and personnel services. Dr. Parran maintained that it "is not socialized medicine," but, on the contrary, would be of benefit to the private physician by relieving him of caring for minor illnesses and referring to him such persons as properly need his help. Dr. Carl Peterson, secretary of the Council on Industrial Health of the American Medical Association, said his group would actively support legislation of this description if it followed reasonably well a set of standards for such services as would center around an industrial physician, with reliance being placed on the industrial nurse under medical supervision. Also, said Dr. Peterson, it should provide industrial hygiene consultation and include disabilities under employment compensation laws. Close connection with medical services of the community should be maintained, he said, along with emphasis on preventive techniques. The proposed service, he concluded, should be founded on good records which reflect the population it serves and the administrative personnel should be adequately paid.

The Future of Vitamins

WE HAVE received an interesting letter commenting on the article which we published in our August issue entitled "The Vitamin Market and Its Probable Future." The letter, written by Leon Kapelsohn, director of the Bureau of Standards of Hearn's Department Store, New York, reads as follows:

"Your article on the vitamin market in the August issue was both timely and informative. I believe there can be no refuting your conclusion that the bulk of the business will remain with ethical manufacturers.

"One very important factor, however, has been overlooked. If the only competition were ethical vs. proprietary, there would be prospects for a gradual gain by proprietary products. Actually, the prospect is for a decline which is likely to become precipitous in the post-war period.

"There is no doubt that the public is vitamin conscious but the demand is going to be met by food manufacturers, through vitamin fortification. When fortification of foods reaches its full scope and when food advertising carries its message to the public, the demand for proprietary vitamin products should decline. I do not believe that any amount of aggressive merchandising can overcome this trend. It is time for the proprietary manufacturer to begin to plan new products to replace vitamins.

"This is only the opinion of one man, not directly connected with the industry, but with an overall view not biased by personal connections. I would appreciate your views on this point."

We believe that Mr. Kapelsohn has raised an interesting point which might well be answered by some of the men actively engaged in the business of marketing vitamin products. We should like to receive some opinions on the subject.

The Advertising Man

WE DO not know who the author of the following is, all we know is that Fred Cullen, of the Proprietary Association included it in a recent bulletin.

Glorifying pink chemises
Eulogizing smelly cheeses
Deifying rubber tires
Sanctifying plumbers' pliers
Accolading rubber panties
Serenading flappers scanties
Sermonizing on throat mixtures
Rhapsodizing hotel fixtures
Some call us new "town-criers"
Others call us cock-eyed liars.

Steenbock Patent Valid

THE Steenbock patent for the production of viosterol (synthetic vitamin D) by the irradiation of ergosterol with ultraviolet rays, was the subject of an unusual action by the Federal Circuit Court of Appeals on August 24. On that date, the court withdrew its opinion of June 30, 1943, which invalidated the patent which was held by the Wisconsin Alumni Research Foundation. The court gave no explanation of its action. The June 1943 opinion which has now been withdrawn, was to the effect that a process using sunlight could not be patented, since solar energy was available to all mankind, and that the Steenbock patent was invaluable discovery but not invention.

Pyrophillite Now Short

SOME time back when there was a shortage of steatite talc and it appeared as though cosmetic manufacturers might be hard put to obtain necessary talc requirements, we published an article calling attention to pyrophyllite as a substitute. As it turned out a shortage of talc for cosmetic purposes did not develop and supplies of the steatite grade of talc soon became plentiful. Now it develops that supplies of pyrophyllite for war purposes are far from adequate, the greatest use to which it is now being put is the dilution of DDT for the production of delousing powders needed by the Armed Forces for typhus control in occupied territories. Other urgent needs for pyrophyllite are for the manufacture of composition battery boxes and agricultural insecticides.

Free Use of Sulfonamides

THE Food and Drug Administration recently stated in answer to a communication that "We have not objected to the sale over-the-counter of adhesive absorbent gauze bandages containing small amounts of sulfonamides. Retail pharmacies may also properly sell to the lay public nose drops and a few new drugs for spot application containing small percentages of sulfonamides when the labeling for such articles bears adequate directions for use and warnings, and when the product is the subject of an effective new drug application as provided for in section 505 of the Act. Sulfonamides for veterinary use which bear adequate directions for use and appropriate warnings may be sold to the lay public. Our suggestion to pharmacists has been that the solution of their problem is for them to obtain guaranties in one of the specific forms prescribed in the regulation under section 303 (c) of the Act. With the exceptions to which we have referred, the sulfonamides and preparations containing them have not been found to be safe for indiscriminate distribution and in general such products bear the 'prescription legend' in lieu of adequate directions for use. They may not, in our opinion, legally be sold except to or upon the prescriptions of physicians or dentists."

All of this makes us wonder about the many uses to which the sulfonamides are being put and the safety of some of the uses. Recently we were informed that quite a number of cases of dermatitis of the face occurred in one of the hospitals of the Armed Forces in this country. After questioning the patients suffering with the dermatitis, it was found that they all used a certain nationally advertised and popular brushless shaving cream. Upon examination, this brushless shaving cream was found to contain a sulfonamide, said to be sulfathiazole. Doubtless the manufacturer of the cream thought that he was pulling a smart one by putting the sulfonamide in the cream as a means of preventing such infections as sometimes occur from shaving. Instead of preventing anything, he actually induced a diseased condition by incorporating the sulfonamide in his preparation. To our mind the sulfonamides are being used far too carelessly. Manufacturers who have ideas of playing around with sulfonamides in their product had better stop and read the record of the Massengill case, which case, by the way, was responsible for the new drug section of the present Act.

High Potency Vitamin D

THE Food and Drug Administration does not approve of over-the-counter sale of extremely high potency vitamin preparations such as capsules containing 50,000 units of vitamin D. FDA states that the literature indicates toxic effects in some persons with doses of 150,000 units of vitamin D per day. Toxicity is affected by method of production of vitamin D, the vehicle, the calcium content of the diet, the season of the year, the duration of administration, the activity of the patient, the state of the alimentary canal, and the age. Medical opinion is divided on the question of the efficacy of such preparations in arthritis, and therefore claims might be misleading. Therefore, says FDA, "high potency vitamin D preparations cannot be used safely or efficaciously by the ordinary lay person and distribution of such products should be restricted to sale by or on prescription."

Bay Rum with Isopropyl Alcohol

THE Food and Drug Administration has decided to allow the manufacture of bay rum with isopropyl alcohol in place of ethyl alcohol for the emergency if the article is offered solely for cosmetic purposes and is labeled with a conspicuous statement showing that it is manufactured from isopropyl alcohol. This statement, says FDA, "should be so phrased and displayed as to clearly distinguish the article from that which was formerly on the market. Names such as 'West Indian Bay Rum' are obviously inappropriate for any except the true bay rum originating in the West Indies and manufactured from ethyl alcohol."

Essential Oils from Liberated Areas

THE U. S. Commercial Company is the Government agency that is charged with the distribution of essential oils which may be procured in North Africa and Italy. In order to effect equitable distribution of these oils, the company has asked interested drug firms to submit to the Foreign Economic Administration information about their 1936-1940 imports of these oils. Sales quotas will be set on the basis of the information received.

At present essential oils from North Africa and Italy can be procured only through Government channels. The USCC, as the Government importing agency in these areas, is endeavoring to move to this country such commodities as are desired by industry. Because of military operations in the Mediterranean area, it has not been possible to open North Africa and Italy to private trade.

In the near future there may be available such essential oils as bergamot, jasmine (concrete and absolute), rose (concrete and absolute), Algerian geranium, nerole, orris, rue, rosemary, and pennyroyal.

Any pre-war importer of these oils may purchase a share of the oils imported by USCC by submitting a sworn statement setting forth the required information regarding each entry cleared through U. S. Customs in his name during the years 1936 through 1940. Required information includes type and description of essential oils (not containing alcohol) entered; quantity entered; date of each entry; entry number, if available; port of entry; country of origin. The sworn statement should be sent to General Commodities Division, Foreign Economic Administration, 14th and Constitution Avenue, Northwest, Washington, 25, D. C.

Post-War British Cosmetic Industry

THE British Board of Trade asked the British cosmetic industry for an expression of views on "the problems of the industry in the immediate post-war period of reconstruction." The nine points in the charter drawn up by the cosmetic industry in reply follow:

1. Control of the industry by license should be continued until all pre-war manufacturers can resume full scale production. Until then no new manufacturers should be allowed to start up.
2. Exports to countries other than European or Far Eastern should be freed from control as soon as possible, preferably before the end of the war. Existing quota holders should be given preference in this trade.
3. Reduction of barriers to international trade should be encouraged.

4. Britain should claim its fair share of perfumery raw materials which may become available as enemy occupied countries are liberated.

5. Wartime restrictions on the size of packages and range of products should be cancelled as soon as possible.

6. Key labor should be released from the Forces as early as possible.

7. Concentrated firms whose premises have been damaged by air attack should be given special assistance.

8. Complete abolition of Purchase Tax is most desirable, but, if a tax on sales is inevitable, all consumer goods should be taxed on a uniform, low rate without discrimination against toilet preparations.

9. Price control should be ended and, *per contra*, trade action to prevent price-cutting should be upheld.

Navy Suspends Drug Buying

MEDICAL supplies for the Navy are now being delivered with sufficient regularity so that Navy officials are able to curtail their supplies and work out a smaller inventory. Admiral J. M. Irish, Acting Chief of Naval Operations for Inventory Control, recently testified before the former Truman Committee, now headed by Senator Mead, that the Navy would buy no more drugs or medical supplies for six months. The Admiral expressed the belief that a curtailment of purchases would operate indirectly to the benefit of the public and to an even greater extent than the release of supplies. Until recently, Admiral Irish explained, the Navy stockpiled medicines for eighteen months as sa afeguard against unpredictable stoppages of supply. It is now down to a twelve-month inventory, and is moving toward a nine-month basis. Senator Burton said to Admiral Irish: "You are trying to tell us that the disposition now is to criticize an officer for having too much stock on hand in his department, as it previously was to censure him for having too little." To this, Admiral Irish replied; "That is precisely right, we are trying to achieve a better balance."

New Berberine Source

AN INTERESTING situation surrounds the announcement by OPA that a uniform base ceiling price of $36.25 per pound has been named for berberine salts. Berberine salts have been unavailable because of the lack of barberry root which was imported from Yugoslavia before the war. One of the chief producers of berberine salts from the imported root had a ceiling price under GMPR of $38.50 per pound, and the other two had ceiling prices of $23.00 and $24.00 respectively.

However one of the two companies with the low ceiling prices under GMPR intends to extract the alkaloid from a berberine bearing plant found in the southern part of this country, and he has on hand a considerable amount of the domestic root. The company's experiments have shown that the domestic root will yield only one per cent berberine, or 20 pounds per ton, against a yield of 4.1 per cent obtained from the imported root bark. For this reason the ceiling was raised above the level that this producer had formerly been held to under GMPR, but the new price is lower than that of one of the former producers.

Proposed U. S. P. Changes

DRASTIC changes in the forthcoming revision of the U. S. P. have been proposed, but before putting them into effect, the U. S. P. Revision Committee is seeking opinions from all who use the compendium.

One of the proposals is to give the English title first place among the official titles and relegate the Latin title to second place or drop it altogether. Another proposal is to rearrange the order of the book by placing active therapeutic agents in the first section of the book, following with surgical aids, such as bandages and sutures, then with diagnostic agents, and finally with those substances classified as "pharmaceutic necessities" and which are items never prescribed by physicians but which are necessary for the manufacture of the items which are prescribed.

A third proposal is to classify all active medicinal agents and their preparations according to a therapeutic or use classification such as "cardiovascular stimulants," "sedatives," "analgesics," "anti-infectives," etc.

A special committee has been appointed to consider all arguments for or against these proposals. The committee consists of Doctors Bastedo, DeGraff, Dooley, DuMez, Krantz, and Seltzer, with Dr. Newcomb as chairman. This committee will meet in late September.

Agar Restrictions Removed

ALL restrictions have been removed from agar due to increased supplies resulting from newly-developed domestic production and from imports from Mexico. Restrictions upon its use were necessary for some time due to the fact that our only source of supply formerly was Japan, and once we became engaged in war with Japan no future supplies were in sight.

The Decline in Sulfonamide Production

PRODUCTION of sulfonamides continues its downward path as compared with last year. In 1943, a total of 10,000,000 pounds was produced. This year production started off at 653,798 pounds produced in January, 663,816 in February, 630,775 in March, 520,867 in April, and only 336,835 in May. This makes a total of 2,806,091 pounds for the first five months of this year, or an average of 561,218 per month. If this average were maintained, a total of only 6,734,616 pounds would be produced this year. But the sharp declines in April and May indicate that the average for the year will be far below the average for the first five months, meaning that the production for this year will probably be in the neighborhood of 5,000,000 pounds, or only half of the production of last year.

The reasons for the sharp decline include of course, the sharply increased production of penicillin and the more widespread use of this latest drug as doctors gain experience in its use. However, another important reason for the decline in production of sulfonamides is the enormous stockpiles which the Government holds. As one manufacturer described the situation early this year, "they have enough sulfa drugs to dust every soldier in every army from head to foot."

The Drug Industry's

Research, New Products and Increased Promotional Activities are Essential in Post-War Conditions

With victory over our enemies clearly in sight, and with rather definite limits now set on the time when our enemies will capitulate, manufacturers are turning their attention from production for war to post-war planning. Naturally enough, a certain amount of post-war planning has gone on since the beginning of the war, but this was long range planning with the details to be ironed out later. Now as the end of the war looms closer, plans are becoming more detailed. Final details will have to wait until after peace has been declared, and until manufacturers know just what conditions they are going to face.

However, drug manufacturers are of the opinion that their major problem will be contracted demand and increased competition. Contracted demand must result from the cessation of heavy Government buying for the Armed Forces, Lend-Lease, and other war needs, as well as from the fact that employment and wages must decrease when the war contracts are terminated. Increased competition will result from the many companies which have grown large due to production for the war. Many of these companies which were once small have been taken over by larger companies selling a different class of products. These large companies are going to see to it that their new acquisitions are developed to the full extent of their possibilities.

In one respect the industry is fortunate. There is no reconversion necessary for drug manufacturers because they never had to convert to war work,—they merely expanded their facilities. However, much of these expanded facilities must of necessity become idle after the war since our peace-time domestic and export demand cannot begin to consume the tremendous production of drug products of which we are now capable. As an example, capacity for the production of sulfonamides was expanded to the extent that 10,000,000 pounds were produced in 1943. This capacity is already far in excess of our needs even in war time, and during 1944 probably not more than 5,000,000 pounds will be produced. The decline in the need for sulfonamides is due largely to the increased production of penicillin, and in a lesser degree to the fact that the Government set its sights too high in buying these drugs for war needs. The machinery used for production of sulfonamides can be used for production of other products, but still there will be much equipment idle for some time after peace is declared.

Penicillin probably presents as black a picture as the industry will face in the post-war period. For here are twenty-one or twenty-two producers of all types—fine chemicals manufacturers, liquor distillers, ethical drug manufacturers, industrial alcohol producers, and biological manufacturers all producing the same product. Some are totally Government financed in this undertaking, some are only partially Government financed, and others are investing their own money. Some are producing in a very big way, some to a lesser degree, and others, of whom much is heard, have not been able to get their plants in operation and are only producing infinitesimal amounts from their pilot plants. Manufacturing technique also varies since some companies possess the "know-how" of fermentation, while others do not possess this necessary knowledge. Naturally this makes for costs and selling prices which vary all over the lot.

What the total demand for penicillin will be in peace-time no one can forecast with any great degree of accuracy. Supplies are now going mainly to the Armed Forces, and Army and Navy doctors are still experimenting to determine to just what extent it can be used safely, and to what extent it will replace other drugs. But no matter what the peace-time demand for penicillin is, many headaches are going to be suffered by some producers when the matter of financing, costs and selling prices, and other pertinent factors are unscrambled. Certainly the manufacturers with the lowest costs and the best outlets through pharmaceutical channels are going to command the business. Those who cannot meet the costs must of necessity fall by the wayside.

But while the producers of penicillin will doubtless be less in number as competitive factors involved in production become effective, the number of pharmaceutical manufacturers selling the product to the doctors, druggists, and hospitals might well be greater than the total number of manufacturers now pro-

Post-War Program

ducing the product. For example, one very large manufacturer who is now selling the product to the Government under his own label, will not sell the product to the doctors, druggists, and hospitals under his own label. After all, this manufacturer is a fine chemical manufacturer who sells his output of medicinal chemicals only to manufacturers and wholesalers. In the case of penicillin, therefore, this company has selected five leading pharmaceutical manufacturers who will distribute his penicillin under their own labels. Certainly, if the product is to be as important as it promises to be, all pharmaceutical manufacturers will want to add it to their lines but they will not want to enter into the manufacture of it. Therefore, penicillin will be sold by several raw material supply houses, and also it will be made and marketed by several pharmaceutical manufacturers if these manufacturers can meet the costs of the raw material houses.

Government purchases of drugs for war purposes has been practically all of the ethical or official types of products. Therefore, the ethical phase of drug marketing has received a still further boost over the climb which it had been making for a number of years before the war. During 1943 several ethical manufacturers reached sales volumes pushing toward $50,000,000 per year, which figure is topped in the proprietary field only by a very few large companies with many units, some of which are ethical. And from all reports, the ethical companies are going to be increasingly aggressive when the war is over.

When manpower again becomes available, leading ethical drug manufacturers are going to add to their research staffs, their sales staffs, and their detail staffs.

Sights are being raised on the number of men necessary to perform these vital functions. After all, the life blood of an ethical drug manufacturer lies in its research staff, and the rise of the leading ethical houses is known to have sprung from heavy investment in research. Research is responsible for the leading products which ethical manufacturers sell, and without research these houses would not even approach the sales volumes which they now enjoy. However, once a product has been discovered and proven by research and clinical evidence, its promotion to the doctors by a detail force is most important. For it has happened many times that the originator of a product lost the large share of the market for his product to another manufacturer who was able to do a better detail job and thus get the doctors to promote his particular product instead of the product of the originator. There are any number of products of ethical manufacturers which are identical but still the product of a particular manufacturer will far outsell all the others.

For many years, the largest ethical drug manufacturers maintained detail staffs of from 350 to 450 men to cover all the doctors in the country. This has been found to be too small a staff to do a proper job of detailing as was evidenced by one manufacturer who was able to promote his ethical specialties in an unprecedented way with a detail staff of 640 men. Now it is generally agreed by the ethical manufacturers that at least 600 detail men are necessary to cover the doctors of the country. However, we hear of plans by one manufacturer to boost his detail staff to the unheard of figure of 800 or 900 men, when the men become available after the war. Detail men must be properly trained before they are put into the field, and it is a year before they really begin to produce results. Many manufacturers insist upon detail men being at least graduate pharmacists while some have higher and some have lower requirements.

In addition to the research staff and the detail staff, the sales staff is all important. For without the cooperation of the wholesalers and the retailers, good products, well detailed, will not sell as they should. Therefore, manufacturers are now laying their plans for increasing and improving their sales staff so as to obtain this essential cooperation so that their products will always be available in the drug stores when the request is made for them either by the consumer direct or through the prescription of a physician.

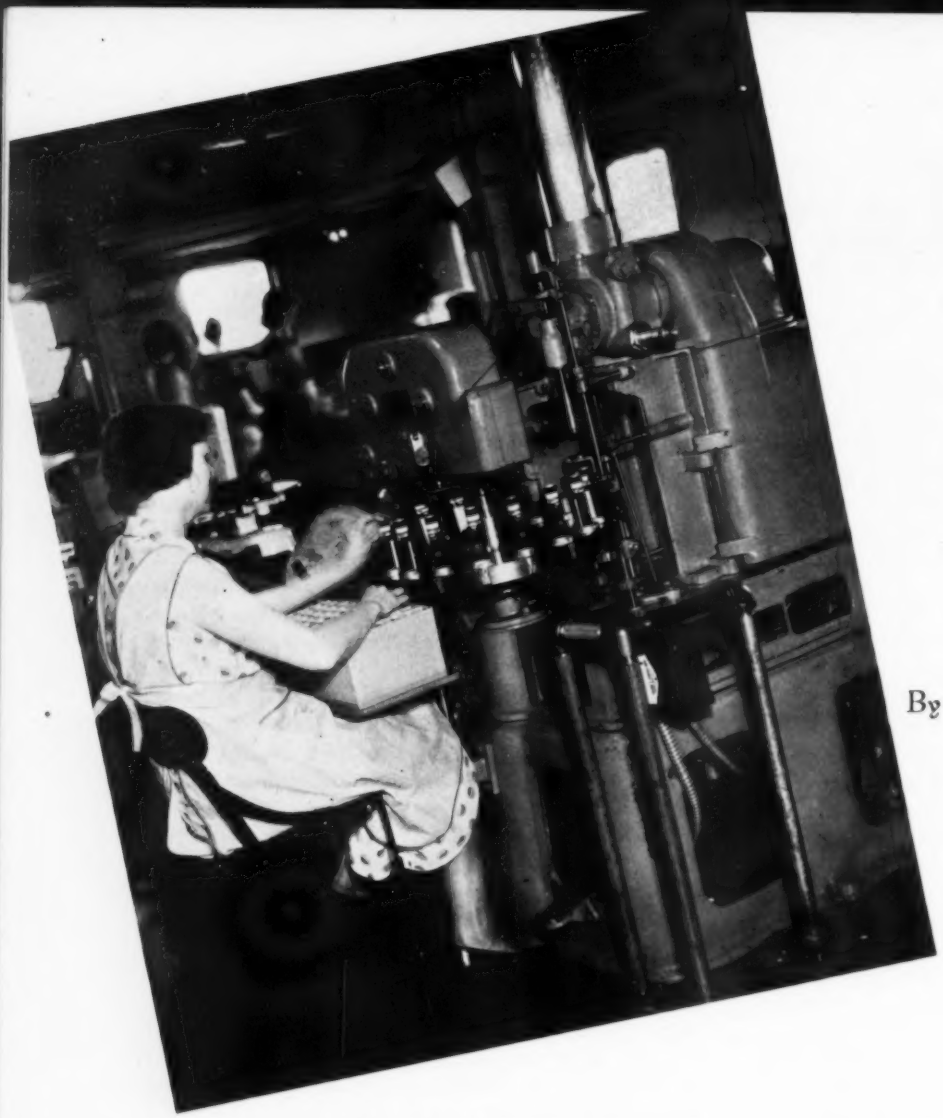
Manufacturers of products advertised directly to the public, or proprietary drug manufacturers are likewise laying their plans for the post-war period although many of them now have ethical subsidiaries as an anchor to windward. Proprietary manufacturers have entered the vitamin market in a big way, but they are not able to approach the volume of the ethical manufacturers in this field. This seems to prove that when proprietary manufacturers sell the same things as the ethical manufacturers, and the public knows it, the public will buy the products of the ethical manufacturers. Therefore, it would seem that the proprietary manufacturers will have to have original products just as they have had in the past. Also they will have to develop these products for the treatment of conditions for which a physician is not usually consulted. Naturally there are many well established proprietaries which have become standard household remedies which the doctor frequently recommends. These will doubtless maintain their positions unless they are replaced by newer products which prove more satisfactory. But intensive research is essential if proprietary manufacturers are not to yield still more ground to the ethical manufacturers.

(*Continued on page 363*)

Brushless Shaving Creams

By E. G. THOMSSEN, Ph.D.

Consulting Chemist



Filling tubes of Burma-Shave at the Burma-Vita Co., Minneapolis.

WHILE women are wont to be fastidious about the creams and powders which they use as toilet articles, it must be said that men are just as particular or even more so regarding the shaving media they use for this daily operation. Shaving soaps are employed as cakes, sticks, powders, creams and liquids and in wooden and ceramic bowls of various designs and sizes. For a long time soaps dominated the market. In recent years, however, they have been losing some of their popularity to brushless shaving creams. So great has been the inroad that soap manufacturers who paid but scant attention to no-lather creams to begin with, have been forced to add brushless shaving creams to their line because of the greater demand.

Brushless creams possess certain advantages over shaving soaps. These are greater convenience and more comfort in shaving. They require no brush for application, take less room in a travelling kit, and may be applied to the face more rapidly. They give a more comfortable shave because they soften the beard more thoroughly and quickly, thereby causing less pulling of tough beards. They leave the face with a thin coating of oil or grease after shaving. This makes the skin softer and less prone to chap in cold, windy weather, rather than drying the skin as is the case with many soaps. This makes the next shave more comfortable, especially with tender skins.

In order to meet the requirements of the users, a brushless shaving cream should have certain desirable qualities. These are obtainable only by careful methods of control as each batch is made. Since humidity and temperature are apt to produce changes in consistency, the creams must be so made as to maintain a satisfactory quality under extreme atmospheric conditions which are apt to be met during manufacture, storage and use. Some creams which I have examined are too hard, too soft or curdy and separated even before they reach the consumers' hands. Different samples of the same brand of cream also show different consistencies in different sections of the country. It is quite evident that these variations are due to atmospheric conditions or to the variations in the raw materials employed in manufacturing them. A properly made brushless shaving cream must not be too thick or too thin, must spread easily over the face to a thin film, must be slightly oily or lubricating during the shaving operation, must soften the hair, must rinse easily from the razor even with cold water, must not change consistency in the tube or jar during shelf life, must be conveniently packaged and must be

perfumed to meet the masculine taste. Certain creams fall down under the searchlight of these requirements, even though many of them are simple of attainment. Just as an example, the question of perfume may be mentioned. Men, in general, do not like heavy, persistent perfumes. I was recently at a camp where there were a number of males who were short of shaving media. One of them purchased a well-known brand of no lather cream which was used generally by the group. The criticism of three-quarters of the men who used it, in spite of the fact that it met most of the other requirements, was that it left an after scent on the face of an unprintable named odor.

In war times it is not possible to select exactly the raw materials necessary to make a uniformly satisfactory cream. The danger of deviations in raw materials has much increased. For this reason it is necessary to pay closer attention to ingredients than in former times. Substitutions have been necessary due to scarcities and war time regulations. It has been necessary in recent years to substitute for such items as glycerine, vegetable oils, lanolin, and certain aromatics and essential oils. These substitutions, even when required under stress, should be made only after a number of lots of creams have been made in small batches, to ascertain the deviations in properties altered by the changes in raw materials.

Not only has it been necessary to change the actual raw materials which enter into the composition of these brushless shaving creams, but the packages to hold them have had to be varied. Due to the scarcity of tin, tubes have been made from other metals and in many cases these metals have been lined with waxes and resins to protect the contents of the tubes from discolorations. Because of this condition, there has been considerable difficulty with the darkening of brushless shaving creams after they have been packaged. Then too, where creams have been packaged in jars, the liners have been substituted and this also produces some discoloration. Conditions like these should be anticipated and changes through accelerated methods should be devised to prevent them as far as possible. The raw material category, therefore, includes packages as well as ingredients.

The usual raw materials used to make brushless shaving creams are stearic acid, caustic potash, glycerine, mineral oil, vegetable oil, wetting agents, boric acid and borax, triethanolamine and other amines, sulfonated oils, propylene glycol, alcohol, beeswax, spermaceti, cetyl alcohol, lanolin, perfume, and soft or distilled water. From this array of raw materials, it is possible to make many combinations of brushless shaving creams, with certain additions to add desirable shaving media qualities to them.

Upon the quality of the raw materials depends to a great extent the color, odor, uniformity and other characteristics of the finished cream. Variations in the chemical and physical properties of the raw materials result in variations of the finished product. This does not mean that it is necessary to purchase high priced raw materials, like C.P. stearic acid and U.S.P. caustic potash pearls for example to make a good grade cream. On the other hand it is not advisable to permit price to be the dominating figure in selecting raw materials and to buy low grade fatty acids, perfumes and alkalis.

The equipment required to make no-lather cream is quite simple but difficult to obtain at this time. It consists of a steam jacketed kettle made either from tinned copper, aluminum, glass-lined steel or stainless steel. This is required to hold and heat the stearic acid and other oils. A lye tank made from either black iron or stainless steel is required for the lye. The agitating kettle consists preferably of a stainless steel, steam jacketed kettle equipped with a slow moving agitator. There is furthermore required the necessary measuring vessels and scales to measure and weigh out the ingredients. Laboratory testing equipment should be available and, of course, collapsible tube or jar filling and closing equipment is necessary for packaging the product. In cases where large quantities are produced, cartoning machinery is desirable.

A few comments should be made regarding the steam jacketed agitator kettle. While stainless steel is best, tinned copper or glass-lined steel may be used to prevent discoloration of the cream. The kettle should be so built that the bottom outlet of the kettle is flush with the inside, or just slightly above the bottom of the dome or cone if the bottom is conical or dome shaped. This opening should not be smaller than 2½ inches. The agitator should move slowly, not over 10 R.P.M. It should be of strong, stout construction, be made of the same materials as the kettle itself and be of such design as to mix the cream well when it is stiff and of difficult consistency to stir. If it is desired to accelerate the cooling of the batch, the jacket of the kettle may be equipped to circulate cold water, which should enter from the bottom and flow out at the top. This arrangement makes it possible to cool a lot of cream over night while stirring and fill it the day after it is made. In this regard it is again to be emphasized that the agitator should be of the slow motion type, for long time rapid mixing is apt to aereate the cream.

As was indicated above many combinations of the ingredients mentioned are possible to make brushless shaving creams. These may be varied to suit the chemist's ideas and to give advertising material to sell the finished products. It is not possible to set forth all the formulae which may be devised. Of these numerous combinations, therefore, we will consider only a few typical ones.

The brushless shaving cream of the earlier type is made by the following formula:—

13 lbs. Stearic Acid (Triple Pressed)
2 lbs. 13 oz. Coconut Oil (Cochin)
3 lbs. 6 oz. Caustic Potash Lye 38 degrees B
12 lbs. 8 oz. Glycerine
2 lbs. Boric Acid (Crystals)
60 lbs. Water (Soft or Distilled)
3 oz. Perfume

The method of procedure in manufacturing brushless

(Continued on page 360)

BRITISH COMBINE

The British, especially, have been using proflavine successfully in the treatment of battle casualties.

PROFLAVINE

By M. A. LESSER

OVERSHADOWED by the sulfonamides and more recently by penicillin, it is more than interesting that at least one of the "old-fashioned" coal-tar antiseptics is again finding a place in the therapeutic sun. Proflavine has proved its worth on the battlefield and this antiseptic is now coming in for increased attention. British physicians[1] have shown a keen interest in the applications of proflavine and American workers[2] are similarly becoming aware of its potentialities.

Today, proflavine is the most important of the acridine group of antiseptics.[3] Often called "flavines" because of their yellow color, these dyes are hardly newcomers to the medicinal armamentarium. Indeed, acriflavine, the first of these compounds to be studied, was introduced by Ehrlich, the father of chemotherapy, in 1912 under the name "tryptaflavine."[4] In the following years, Browning and his associates[5, 6, 7] found that not only were proflavine and acriflavine powerful and relatively non-toxic antiseptics, but, more important, that they had an intensified action in the presence of serum—a property which set the acridines in a class apart from then known antiseptics.

Although proflavine had been used in various conditions, it suffered from the partial obscurity faced by antiseptics in general following World War I. It was not until the revival of chemotherapy through the sulfas that coal-tar derivatives returned to importance. Its use in the field treatment of wounds revived interest in proflavine. Last year, in a re-evaluation of the acridine dye antiseptics, Browning[8] pointed to the excellent results obtained in the Lybian campaign by the use of proflavine powder in the treatment of grossly infected and purulent wounds on which sulfanilamide would do no more than arrest the spread of infection, without much effect on the suppuration.

Because of its greater solubility, acriflavine had become the accepted, official representative of the acridine antiseptics. Subsequent studies, however, showed that proflavine was superior to acriflavine in many respects. While all the flavine antiseptics in general

use show a very low toxicity, proflavine has been shown to be only one-quarter as toxic as acriflavine.[9] It is also much less irritating to tissues as shown by various indicative tests,[6, 10] including some made on brain tissues.[11] A more constant and therefore a more dependable preparation than acriflavine,[12] a recent editorial in the J.A.M.A.[2] has stated that, "Recent researches show proflavine to be the compound of choice as an efficient wound antiseptic, probably superior to the sulfonamides in the presence of gas gangrene."

Chemically, proflavine, or more properly, proflavine sulfate, is 3,6-diaminoacridine monohydrogen sulfate or 2,8-diaminoacridine monohydrogen sulfate; both formulas being given in the semi-official *New and Nonofficial Remedies* of the American Medical Association.[13] Proflavine sulfate is a reddish-brown, odorless, crystalline powder that is soluble in water and alcohol, but nearly insoluble in most other organic solvents. Stable to heat, but relatively instable to light, solutions of proflavine should be stored in amber bottles and discarded after one week or at the appearance of any deposit.

According to *New and Nonofficial Remedies*,[13] proflavine compounds are manufactured under U. S. Patent 1,005,176, now expired, by license of the Chemical Foundation, Inc. However, the literature describes other, newer procedures for preparing this acridine compound.[14, 15] According to Albert,[16] the usual commercial method of making proflavine sulfate, a distinct departure from the method described in the *British Pharmacopoeia*, is to heat m-phenylenediamine hydrochloride with formic acid and glycerine.

Known to be an effective germicide against a variety of pathological microorganisms, it has been shown that proflavine is efficient in preventing infection in wounds.[17] In 1942, McIntosh and Selbie,[18] in experiments on mice, found that proflavine was of greater value than sulfanilamide and was at least as good as sulfathiazole in the local prophylaxis and treatment of gas gangrene infections. In continued studies reported last year, these workers[19] came to the conclusion that best prophylactic results in anaerobic wound infections are achieved with a mixture of drugs. On the basis of their experience, they recommend a mixture of:

Proflavine	**1 part**
Sulfathiazole	**99 parts**

In addition to its powerful action on pyogenic cocci, this mixture is said to have a high degree of activity against *Clostridium welcheii* and other gas gangrene—causing organisms. A very similar combination of proflavine base and sulfanilamide was suggested by other workers.[20]

Whether or not proflavine inhibits the action of white blood cells is still a moot point, but the more recent investigations[8] indicate that leukocytes retain a good proportion of their activity in the presence of this antiseptic. Newer clinical results also indicate that proflavine does not seriously retard healing.[8, 21]

The reaction of the medium in which proflavine is used has a definite effect upon its efficacy as a germicide;[22] being more efficient as its solutions approach the alkaline range.[4] Unfortunately, the popular acid sulfate, in the commonly used 0.1 per cent solution, has a pH of about 2.5; an acidity which cannot fail to irritate delicate tissue. This difficulty can be overcome quite readily, however, by a simple procedure suggested by Albert and Gledhill,[23] At the time of dispensing, a suitable 0.1 per cent solution can be prepared by warming a mixture of 1 Gm. of proflavine sulfate with 0.25 Gm. sodium bicarbonate in 40 cc. of water until dissolved; cool and dilute to 1 liter. Such a solution is bland and has a pH of 6.0 which is non-injurious to tissues. A 1:1000 solution of proflavine in physiological salt solution buffered to a pH of 6.3 is often employed in treating wounds.[3]

As a group, the acridine dye antiseptics have found rather extensive use in various conditions, including: wounds, urethritis, gingivitis, gonorrheal conjunctivitis, blenorrhea, eczema, furunculosis, otitis media, and other conditions requiring the use of a germicide.[13] During the last year or so, proflavine has come forward as an effective antiseptic for treating wounds. In older methods, a 1:1,000 solution was commonly used for cleaning wounds and for impregnating gauze as dressings or packings.[4, 21] The old belief that proflavine-impregnated dressings had no inhibitory value because of absorption of the dye by fabrics has been obviated by newer research.[24]

In their work on casualties during the Middle East campaign, Mitchell and Buttle[25] circumvented this difficulty entirely by using proflavine as a powder on wounds and thereby opened up new potentialities for this agent. In eighty cases, including many deep or extensive wounds often involving bones or joints, proflavine powder was applied after chemotherapy had failed; either because of inadequate application of the sulfa drugs or because of resistance to their action. Failure of various other methods of treatment led to the dusting of proflavine powder into the wounds. The amount of proflavine used never exceeded 2 Gm., and usually only about 0.5 Gm. or less was employed. The drug was never used more than two or three times; 4 to 28 days elapsing after each application. When used prophylactically, the amount varied according to the size of the lesion, but was usually about 0.25 Gm. mixed with 2 to 5 Gm. of powdered sulfanilamide.

The use of proflavine in these cases resulted in beneficial results in almost every instance. When staphylococci were the infecting organisms, proflavine proved more efficient in controlling or eliminating the infection than any drug hitherto tried. The response of many wounds with mixed infections was also good. The dressings were usually painless and no general toxic symptoms were noted. In only one instance did proflavine interfere with healing. Later, in a report on a larger number of cases,[26] these surgeons had a chance to compare proflavine with diflavine and came to the

(Continued on page 356)

ON SOLID GROUND

It is our firm belief that the drug manufacturing industry should be proud of its position at the present time. It should be pleased with the progress that it has made in recent years, and it should seek out all methods of further improving its position in the eyes of the public. There is no need for the industry to be intimidated by the threats which are hanging over the medical profession, for, if the medical profession had been as forward-looking as the drug manufacturing industry has been, socialized medicine would never be contemplated.

THE drug manufacturing industry as it is now constituted is, as is everything else, the result of an evolution. In bygone times, the proprietary medicine industry manufactured and sold preparations of secret formulae which were advertised directly to the public and used only for purposes of self-medication. The pharmaceutical manufacturers—or manufacturers of prescription products, developed slowly to their present high place in the industry within comparatively recent years. The reason for the development of the pharmaceutical manufacturers, or as they are more often called, ethical manufacturers, was the result of many conditions.

In the first place, pharmacists operating retail stores were not equal in skill or enthusiasm for the professional aspect of the business of operating a retail pharmacy. As the result of this it was found that large scale preparation of pharmaceutical preparations under the direction of scientifically trained men resulted in the production of uniformly potent preparations so far as known methods of evaluation were known at the time. Since pharmaceutical preparations were first prepared by manufacturers for distribution to pharmacies, methods of standardization and of stabilization have been improved to the point that manufactured products are to be far preferred over the preparations that an individual pharmacist might prepare, and the list of preparations that manufacturers can furnish to pharmacists has broadened considerably.

Further, pharmaceutical manufacturers finally took the lead in research leading not only toward the development of new and improved products for the treatments of various diseases, but they also took the lead in research leading toward improvement of the specifications and standards for the preparations listed in the official compendia.

Immediately prior to the enactment of the Federal Food, Drug and Cosmetic Act, and particularly following the enactment of that law, the distinction between proprietary manufacturers and ethical manufacturers narrowed greatly. In the first place, many ethical manufacturers were marketing products the sale of which was mainly over-the-counter and not on the prescription or advice of a physician, and the proprietary manufacturers were listing all their active ingredients on the label under the law and in keeping with the practices of the ethical manufacturers. As a matter of fact, the only difference between them today is the fact one group depends for promotion of its products by advertising direct to the public, and the other depends for promotion of its products upon the good-will and the confidence of the doctors in their products. The basic differences between them is no greater than the basic differences between the Republican and Democratic parties (omitting the New Deal).

Today, the ethical manufacturers and proprietary manufacturers are both selling preparations of known composition for various diseases. Naturally enough, proprietary manufacturers do not sell preparations for the treatment of diseases for which there is no known cure, while ethical manufacturers sell products which physicians use in the alleviation of the symptoms of these diseases. But both types of manufacturers are conducting research toward the better control and standardization of their products, and both are conducting research toward development of new and improved products for the treatment of known diseases.

These two branches of the drug manufacturing industry constitute practically the entire resources in this country for the supply of remedial agents to prevent, mitigate, and cure the diseases of man and other animals.

This industry is under close supervision on the part of various agencies of the Federal Government, State Governments, and City Governments. The products of the industry cannot be marketed unless they are definitely known to possess the virtues attributed to them. Certain products cannot be sold over-the-counter and can be obtained only by presentation of a doctor's prescription. All products must carry on the label a list of the active ingredients, and these ingredients must meet the rigid specifications of the official compendia. There is today, no leeway within the drug manufacturing industry for the marketing of products that are dangerous to health or that are not efficacious in all the conditions in which the labeling or

advertising claim it to be. Mistakes may still happen, but these mistakes are immediately called to the attention of the proper agencies and any dangerous results are therefore minimized. The drug manufacturing industry has been policed both by itself and by Government agencies to the point at which it is about as safe an industry serving the public as can be imagined. This control over the industry is enforced by doctors in public health positions, and by pharmacists, chemists, bacteriologists, and other scientists in Federal, State, and Municipal agencies.

Yet with this almost perfect picture of an industry for the production and development of remedial agents, we are being told that if the medical profession is found to be in such condition that steps on the part of the Government are necessary to assure proper medical attention to all the people of this country, then the drug manufacturing industry will have to be completely directed by the Government also.

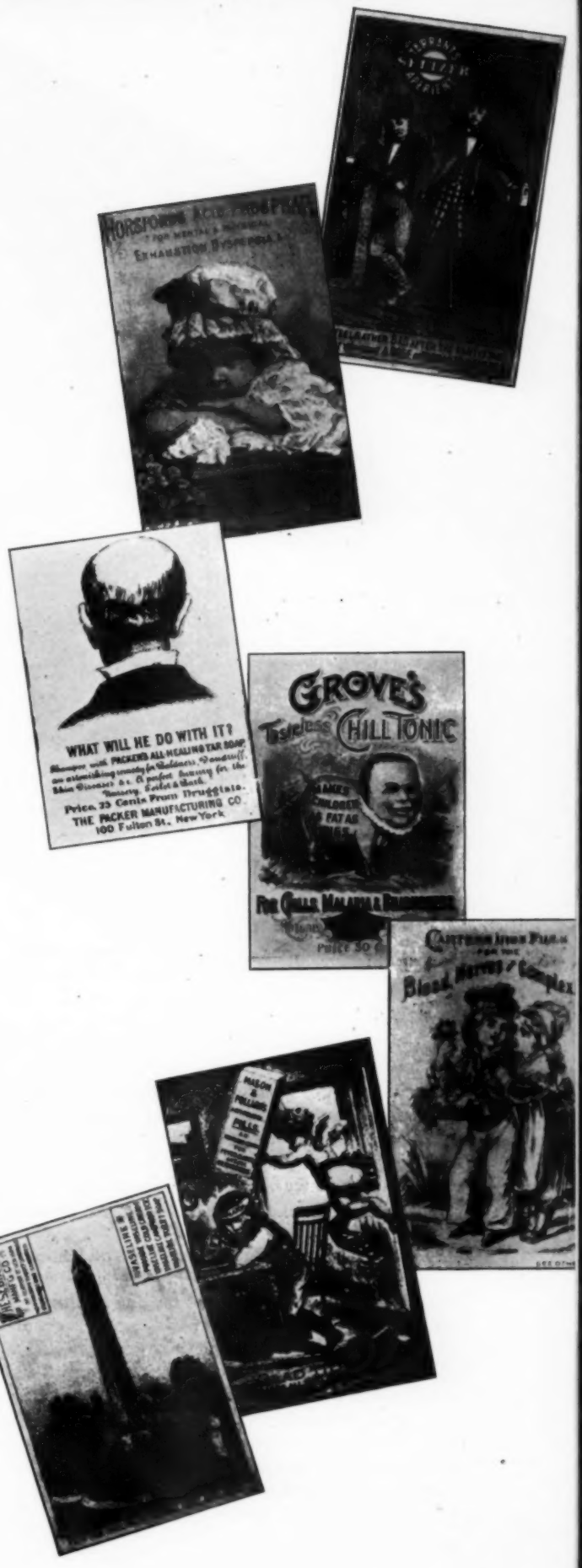
This we refuse to believe to be necessary because of the picture of the industry as outlined above and for reasons which the medical profession itself should best face if they want to continue to enjoy the freedom of private practice as it now exists.

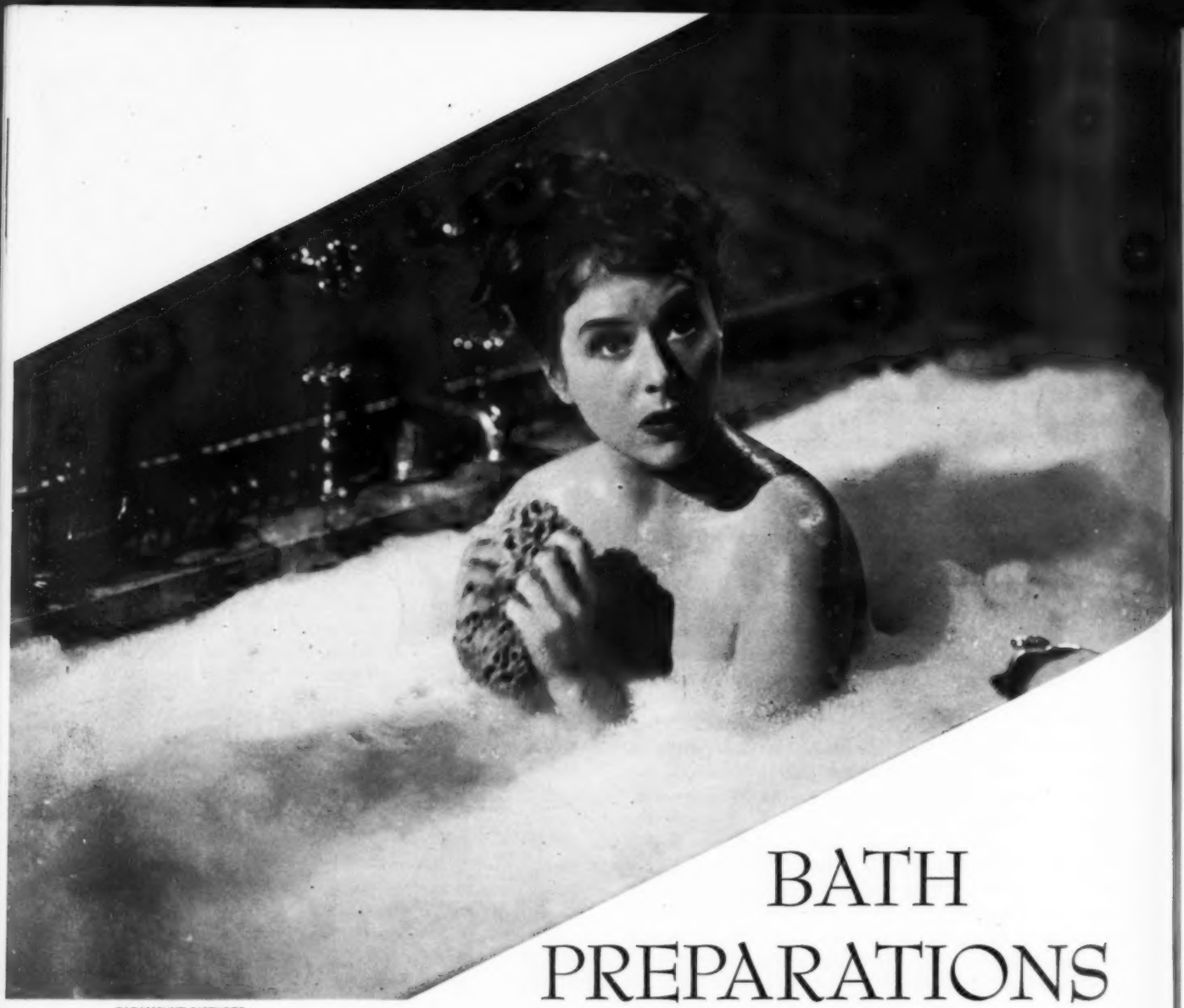
Dr. Morris Fishbein, editor of the "Journal of the American Medical Association," and official spokesman for the A. M. A., told the drug manufacturers on one occasion that whatever method was finally devised by the Government for the practice of medicine, the doctors would be the ones who would have to administer it, so they would be certain of jobs. Therefore, he said, the ones who should really worry about the socialization of medicine are the drug manufacturers since they would be put out of business. A nice argument from Dr. Fishbein's point of view, but one that will hardly hold water.

For after all, the criticisms that are causing the trend toward socialized medicine are not directed against the drug manufacturing industry. The main factors in this trend are the high costs of medical care as represented chiefly by the doctors' fees and the hospital bills. It is not the cost of ordinary medication that anyone complains of, but it is the enormous costs of surgical and hospital fees in cases of cataclysmic illnesses that drive people to desperation and cause them to favor a change in the method of administering medical care.

Remember that the medical care given to employees of the Kaiser industries by Dr. Sydney Garfield use the best remedial agents at hand no matter by whom they are made. There is no attempt in this instance, or in the instances of group medicine administered by large companies, unions, or other groups, to furnish their own medicines. The doctors practicing in these groups want the medicines that will give them the best and the quickest results so that the patients can be turned out well as quickly as possible. After all, a patient with a prolonged illness is a liability in group medicine and not an asset as he is in private practice,

(*Continued on page 359*)


WHAT WILL HE DO WITH IT?
Price, 25 Cents From Druggists.
THE PACKER MANUFACTURING CO.
100 Fulton St., New York
GROVE'S
Tasteless CHILL TONIC
Block Nerves & Complex



PARAMOUNT PICTURES

BATH PREPARATIONS

BATH preparations may be divided into four different classes—scents, bubbling baths, water softeners, and finally dusting powders. The last mentioned is not strictly a bath preparation but one used after the bath. The first three classes are sold as such or may be combined into a single product having the properties of all.

In any discussion of bath odors, it would be difficult to choose any preferred type since all types are in demand, but it may be safely stated that it should be made so that a sufficient quantity of perfume could be introduced into the tub properly to scent a relatively large amount of water. The amount of perfume used in the product must be rather high for this reason. A delicate scent may be imparted by means of the bath salts. These consist essentially of a water soluble salt impregnated with the perfume and perhaps some color. The choice of a salt should not be difficult since any of a large number are available. Sodium sesquicarbonate seems to have proved to be a particularly happy choice since it normally comes in small needle-like crystals which are uniform in size and semi-transparent in appearance. This material also will not interfere with the use of soap and certainly in hard water areas will aid in its detergency since it will precipitate any soluble calcium present and in this way soften the water. Other salts which may be used are the phosphates which would also precipitate calcium salts, though they do not have as good an appearance as the sesquicarbonate crystals.

The general method of incorporating the perfume and any desired color with the crystals is to dissolve the color and perfume in a minimum of alcohol (isopropyl will do) and mix the solution with the salts and then to allow the alcohol to evaporate. The smaller the crystal size of the salts the greater would be the amount of perfume possible to incorporate, since it will be absorbed on the surface of the crystals, and smaller crystals in the aggregate would present a larger surface

for absorption. Too large an amount of perfume would cause the crystals to cling to each other and cause the product to be difficult to pour. Too small an amount, on the other hand, would be insufficient to perfume the bath. The amount that could be absorbed varies with the essential oils used, so each odor becomes a separate problem.

Of more recent vintage is the bath oil in which it is possible to incorporate a larger amount of essential oils than in any powder-like vehicle. This product may be formulated so that the oils are kept on the surface of the water or made to be miscible with it. The advantage of the first lies in keeping the odoriferous materials at a point where the greatest advantage could be gained insofar as the amount of perfume that volatilizes to greet the nostrils of the bather is concerned. The second type which spreads the odor throughout the bath, though not as strong in its odor as the former, would not leave any scum in the bath at its conclusion. The immiscible type may be made by dissolving the perfume oils in a water-immiscible solvent such as mineral oil or any other water-immiscible odorless solvent such as triethylcitrate for example. Essential oils vary so greatly in their characteristics that it would be difficult to predict which solvent would serve the purpose best. Generally speaking, however, solvents of the ester types are superior to hydrocarbons such as mineral oil. However, it is perfectly possible to use mineral oil as a vehicle for *some* oils. The percentage of the oils used would necessarily have some bearing on the proper choice of a solvent. Bath oils may contain as much as 35 per cent of essential oils, and unless the oils from which the compound is made are carefully chosen some of them may be precipitated from solution. The finished solution of perfume oil in the solvent may be tinted to any desired shade with any of a number of certified oil-soluble dyes. This type of bath oil is primarily an odor carrier and does not lend itself to the incorporation of water softening agents or foaming agents.

Another type of bath oil may be made in which the perfume oil may be distributed throughout the tub. For this type of product alcohol is a better vehicle and if the percentage of perfume oil to be used is relatively high, the addition of a few per cent of a dispersing agent such as the highly substituted alkylated sorbitan or monnitan monolaurates, would insure complete dispersion throughout the water without any of the oil separating and appearing on the surface of the globules. Though, as mentioned above, the odor value from a preparation of this type may not be as great, other agents could be incorporated in this latter preparation since foaming agents for example are, generally speaking, soluble in alcohol. It would be difficult to incorporate a water-softening agent in either of these products since neither the carbonates nor the phosphates are soluble in non-aqueous vehicles. The introduction of a dispersing agent, however, would have a tendency to keep the precipitated calcium soaps in suspension so that the undesirable ring associated with bathing in hard water does not appear.

Bubbling bath preparations have been on the market for a long enough length of time to indicate that their popularity will continue. The activating ingredients in these preparations have been the sulfated alcohols such as the sodium lauryl sulfate or similar types of compounds. There have been a great many of these hydrophylic agents introduced to the market in the past few years and utilized in bubbling bath preparations and most have enjoyed good success. Most of the compounds have been the so-called anionic type of detergent, because their activity stems from the anionic portion of the molecule. More recently there have been introduced some cationic detergents which are also powerful foaming agents. They have been used when some of the anionic types became difficult to obtain for the purpose because of their greater need in more essential work. The cationic detergents are usually quaternary ammonium compounds which, in addition to their value as detergents, have good bactericidal qualities. The author definitely has no preference for one type over the other, but thinks it wise to mention that mixing a cationic with an anionic detergent will obviate the detergent and foaming properties of both and, therefore, render the product useless.

Bubbling baths appear in both the liquid and powder form. In the powder form the sulfated substance is usually mixed with a salt to enhance its appearance and which also could be used as a water softener. Sodium sesquicarbonate is ideal for the purpose but other salts may also be used such as the phosphates. The bubbling bath in the liquid forms is very much the same except that alcohol is usually added to help solubilize the foaming agent and therefore makes it difficult to incorporate the water softener. The quaternary ammonium compounds do not lend themselves as well to incorporation with the water-softening salts because of the danger of this precipitation with anionic substances. These compounds, however, may be marketed as a powder or as a liquid bubbling bath.

Water softeners suitable for use in bath preparations may be chosen from a fairly large list of substances. Sodium sesquicarbonate because of the crystal structure presents the best appearance but there are others which have a greater utility. The purpose of the water softener is to remove dissolved metallic ions capable of reacting with and precipitating the soap from the field of reaction. The leading offenders in hard water areas are calcium and magnesium salts. The carbonate ion will precipitate both, but the phosphate ion will also, and more completely. Among the phosphates there are some compounds which are not only capable of precipitating soluble calcium and magnesium but also of peptizing them so that the precipitate remains suspended in the water but with no effect on any soap that may be subsequently introduced. Good examples of these are the sodium hexametaphosphates and the sodium pyrophosphates. The normal sodium phosphate

(*Continued on page 363*)

SULFADIAZINE

By W. B. BAKER*

"Sulfadiazine has met and passed, with flying colors, the severe test of the clinic. This outstanding drug, which is the peer of the sulfonamide group, is one of the most respected drugs in medical history."

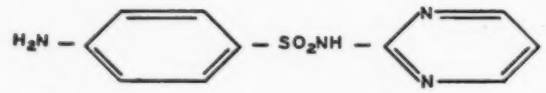
ONCE the inherent potentialities of the sulfonamide group were clear to the scientific world, organic chemists seized upon the opportunity to synthesize new sulfonamide compounds to the number of several thousand. However, relatively few of the compounds have proved their ability to meet the severe test of the clinic.

Sulfadiazine, which followed closely the use of sulfapyridine and sulfathiazole, has survived not only very intensive laboratory study but also the most critical clinical evaluation. This outstanding drug, the properties and synthesis of which are described by Roblin, *et al*, is at present recognized as the most effective chemotherapeutic agent in the treatment of a large variety of infections.

Sulfadiazine has become one of the most respected drugs in the history of medicine, having risen to its high position by virtue of its life-saving properties and its ability to lessen suffering and combat the ravages of many disease processes, with a minimum of toxic reactions.

Sulfadiazine is the 2-sulfanilamidopyrimidine analogue of sulfanilamide. The name "sulfadiazine," which has been accepted by the Council on Pharmacy and Chemistry of the American Medical Association, was given to 2-sulfanilamidopyrimidine in order to prevent confusion with sulfapyridine (2-sulfanilamidopyridine)—the pyridine homologue of sulfanilamide.

The structural formula for sulfadiazine is as follows:



Molecular Weight=250.27
Melting Point, between 252° and 256° C.

Sulfadiazine may occur as white crystals or crystalline powder. It is odorless and tasteless. One Gm. dissolves in about 8130 cc. of water at 37° C. It is readily soluble in aqueous bases or dilute mineral acids, but it is sparingly soluble in alcohol or acetone, and insoluble in ether or chloroform. Sulfadiazine undergoes decomposition beyond its melting point.

Further specifications for sulfadiazine are given in New and Nonofficial Remedies and in the First Bound Supplement to the U.S.P. XII.

Sulfadiazine is considered to be the most effective medicinal agent in the treatment of *pneumococcal pneumonia* and other pneumonic (or pulmonary) infections (i.e., *hemolytic streptococcal* pneumonia, *Friedländer's bacillus* pneumonia, *staphylococcal* pneumonia). It is the drug of choice in *hemolytic streptococcal* infections (i.e., meningitis, erysipelas, septicemia, cellulitis, acute osteomyelitis, acute mastoiditis, otitis media, tonsillitis) and in *meningococcal meningitis* and other forms of purulent *meningitis* (i.e., *pneumococcic*, *staphylococcic*, and cases of unknown etiology).

Sulfadiazine is, again, the drug of choice in the treatment of urinary tract infections in adults (i.e., infections due to *Aerobacter aerogenes*, *Shigella dispar*, and other gram-negative organisms belonging to the so-called *coli-typhoid paratyphoid-dysentery* group).

In scarlet fever, sulfadiazine is recommended in addition to antitoxin for chemotherapeutic effect on septic lesions, although the drug has no therapeutic effect on the toxic stage.

Preliminary evidence suggests that sulfadiazine may hold great promise in prophylactic use against outbreaks of meningococcic meningitis or epidemics of hemolytic streptococcus infections in areas where crowding of susceptible populations is necessary, such as military establishments.

Sulfadiazine has a broader therapeutic range than the other sulfonamide drugs (sulfathiazole, sulfapyridine, sulfanilamide). It produces less toxic reactions and causes less nausea and vomiting. Sulfadiazine appears to be relatively well tolerated when administered intravenously and subcutaneously, in appropriate dilution in the form of the sodium salt.

Sulfadiazine is more advantageous than the other drugs from the standpoints of absorption, blood concentration and penetration into body fluids. It is more rapidly absorbed and excreted than sulfathiazole, therefore its administration results in higher, and more

*Director of Technical Service, Pharmaceutical Department, Calco Chemical Division, American Cyanamid Company, Bound Brook, N. J.

easily attained, blood levels. The absorption is more regular with sulfadiazine than with sulfathiazole, therefore more dependable blood levels are maintained. Sulfadiazine is excreted somewhat less rapidly than sulfanilamide or sulfapyridine in the presence of normal renal function, hence it maintains blood levels longer than the latter drug. The excretion of sulfadiazine is generally complete within 48 hours after the administration of a single dose.

Administration of sulfadiazine results in a lower proportion of acetylated (conjugated) sulfadiazine in the blood, than there is acetylated sulfathiazole when sulfathiazole is administered, therefore sulfadiazine remains more active. The ratio of "free" and acetylated fractions of sulfadiazine is frequently less than that which has been previously noted for sulfanilamide. The relatively small amounts of acetyl sulfadiazine found in the blood are due to the fact that this compound is quite easily excreted in the urine when kidney function is normal.

The decline of sulfadiazine blood levels following discontinuance of the drug is more gradual than with sulfathiazole.

The penetration of "free" sulfadiazine into body fluids (cerebrospinal, pleural and ascitic) is better than that of sulfathiazole.

Fewer renal complications occur with sulfadiazine, because acetyl sulfadiazine in aqueous solution has a greater solubility than the "free" drug. This is not true of acetyl sulfathiazole.

Sulfadiazine passes into the cerebrospinal fluid in about the same manner as does sulfanilamide, but it does not pass into other body fluids as rapidly as does sulfathiazole or sulfanilamide.

Average Dose—Since sulfadiazine is poorly soluble, it should be administered by the oral route. However, salts of sulfadiazine are readily given and readily tolerated by various parenteral routes. All dosages of sulfadiazine should be controlled if possible by determination of the concentration of the drug in the blood at frequent intervals. In general, the blood concentration should range from 5 to 15 mg. per 100 cc.

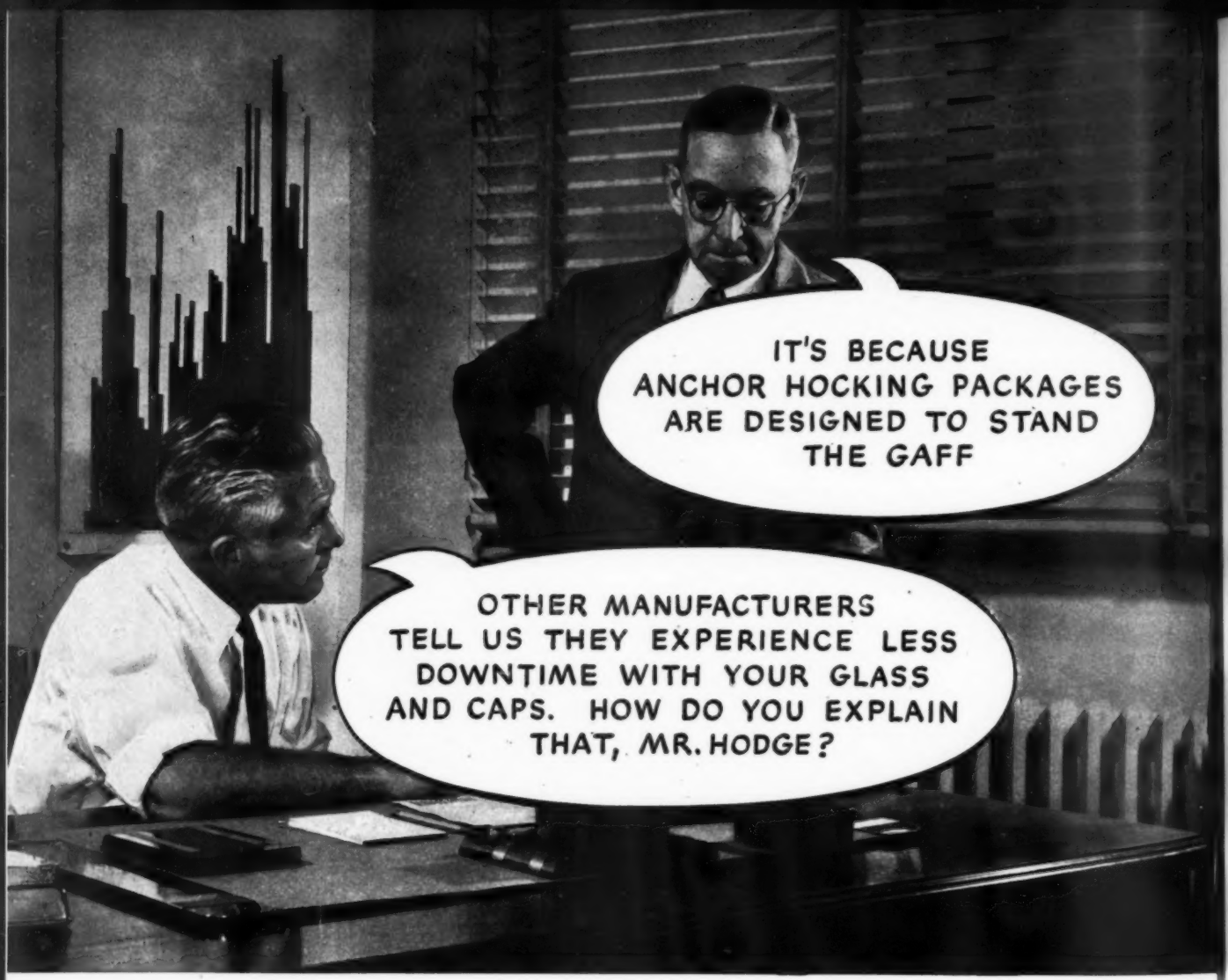
For the treatment of *pneumococcic pneumonia, severe hemolytic streptococcus* infections, *severe staphylococcic* infections, and *meningococcic meningitis*, the initial adult dose of sulfadiazine is based on 0.10 Gm. per kilogram of body weight, then subsequent doses of 1.0 to 1.5 Gm. every four hours day and night until the temperature has been normal for from five to seven days. In *pneumococcic pneumonia* 1.0 Gm. of the drug is administered every four hours day and night until the temperature has been normal for 72 hours. The drug may then be stopped.

In children, the initial dose for *pneumonia* is 0.10 to 0.15 Gm. per kilogram of body weight. Subsequent doses are ¼ of the initial dose given at intervals of six hours until the temperature has been normal for at least 48 hours.

In *mild* or *moderate hemolytic streptococcic* infections,

(Continued on page 362)

The most widely employed method of oral administration of sulfadiazine is in the form of compressed tablets, the most popular dosage form being 7.7 gr. (0.5 Gm.) tablets. This is a view of the tablet making department of Sharp & Dohme.


IT'S BECAUSE ANCHOR HOCKING PACKAGES ARE DESIGNED TO STAND THE GAFF
OTHER MANUFACTURERS TELL US THEY EXPERIENCE LESS DOWNTIME WITH YOUR GLASS AND CAPS. HOW DO YOU EXPLAIN THAT, MR. HODGE?

There are many reasons why Anchor Hocking containers give the smooth performance, ease of handling and resistance to breakage that add up to "less downtime." Rigid manufacturing specifications...improved methods...careful specification of raw materials ...scientific engineering and design...uniform distribution of glass in the container...strict temperature control in the annealing operation...and, above all, the know-how of veteran glass workers. Anchor metal and plastic caps, too, stand the gaff on the production line. Among the five types (Amerseal, C.T., NKCT, Tricon and Plasticap), there's one or more ideally suited to your need for dependable, airtight, leakproof seals that protect your products from evaporation and deterioration until entirely consumed. And their ease of application will help keep your production on schedule with a minimum of costly downtime.

"Meet Corliss Archer" every Thursday evening, entire coast-to-coast network CBS

J. A. HODGE, one of Anchor Hocking's ablest and most popular men, has been a member of the Anchor Hocking family for 13 years.

ANCHOR HOCKING
GLASS & CAPS
ANCHOR HOCKING GLASS CORPORATION · LANCASTER, OHIO

Packaging and Selling

Leveling Off?

We were beginning to think that this chart we conduct on 12-month sales of cosmetics would never stop going up but now, for the first time since the middle of 1941, the upward flight has been checked. As "leveling off" is the burden of much of the conversation in the industry these days, the chart is certainly reflecting the times.

Some of the better sales managers who have been making trips recently report themselves distressed by evidences of bursting inventories in all too many places. The Toilet Goods Association, too, is concerned as evidenced by its report of August 14 on this general subject, which report is included at the end of this story. The general feeling is that the palmy days are over and that the inevitable headaches, following too easy living, are just around the corner. This year still looks good and may even exceed 1943's peak but the winnowing down and the weeding out process which many astute sales managers feel is coming is very much the talk of the times. Naturally, each sales manager feels that his merchandising during this period has been so well planned, that he is not one of those due for the winnowing, naturally. But an examination of some of the stock rooms or even of the counters on the floor is convincing evidence that somebody is due for it.

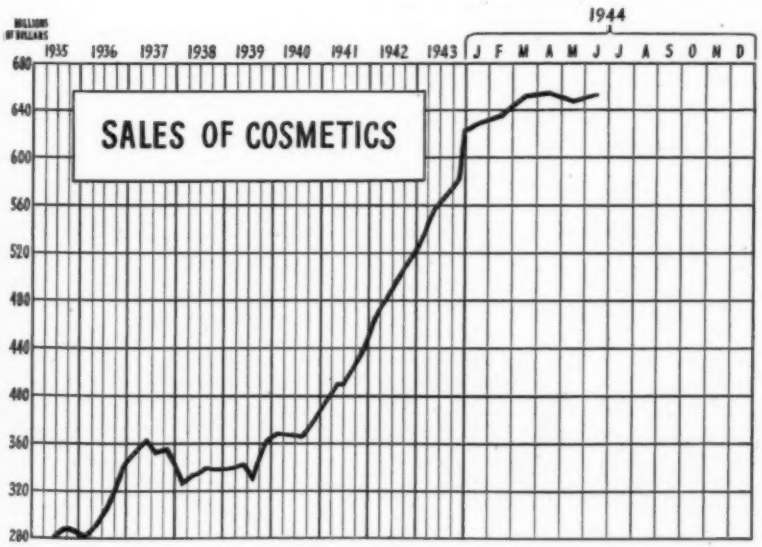
And just what is going to happen when the attempt is made to equal the fantastic figures which have been made on all sides during this period? The attempt, it is safe to predict, will be made and while there are undoubtedly more sensible approaches the promotion is the good old standby, and most sales executives look for promotions on a grand scale.

Many demonstration accounts have had to increase their selling costs beyond the point at which a demonstration will pay if and when leveling off really gets under way. That, in itself, will bring adjustments and probably widespread personnel changes.

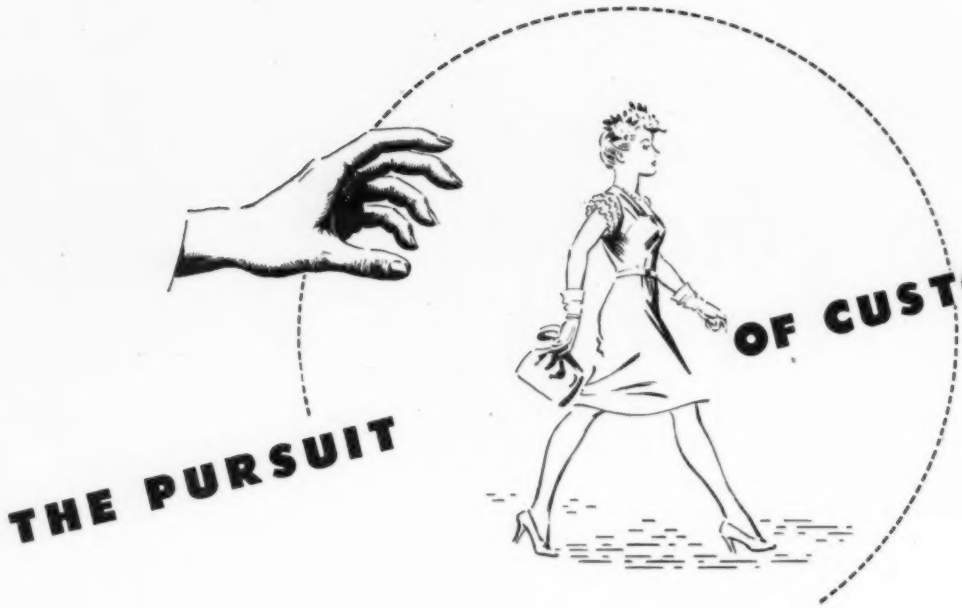
Each sales manager is considering carefully these days, these and other things which will happen—to the competition, naturally. But it just might happen to you.

The T.G.A. committee's report on inventories expresses these opinions: "Manufacturers are advised to hold their sales of wartime merchandise to a level that will not cause an overstocking of the distribution branches. It is so easy to "push" now to get large sales volumes that look good at the Directors' Meetings but the whirlwind will have to be faced if factory sales are not controlled now. That whirlwind will result in either the return of excess dealer inventories and a one hundred per cent write off on the cost of sales, or a disintegration of the manufacturer's good will due to the public's unwillingness to continue to accept substitute goods at a time when it believes it should be getting pre-war quality. Dance today, if you so desire. The piper will be outside your door with his tin cup tomorrow.

"To Wholesalers, the Committee extends the same general advice. At no time in many years have the retailers enjoyed the volume of business that has come to them during the past three



Sales of cosmetics for the twelve-month period ending with June, 1944, totaled $653,476,000. This was just about $100,000,000 higher than sales for the twelve-month period ending with June, 1943 and about $5,000,000 more than for the twelve months ending with May, 1944.



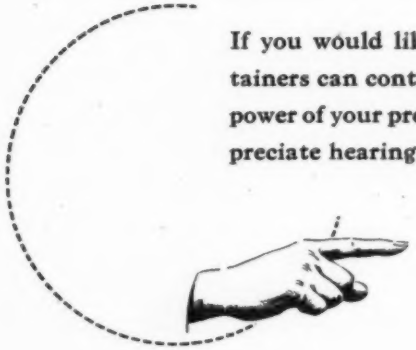
THE PURSUIT OF CUSTOMERS

AFTER the war, when the accent shifts from production for destruction to production for distribution, the pursuit of customers will begin in earnest.

Every type of sales aid that American merchandising genius can devise will be employed to win the interest and loosen the purse strings of the public.

In the forefront of such aids will be glass containers . . . the adaptability, durability and show-window advantages of which make them a particularly potent factor in mass marketing.

If you would like to learn how Carr-Lowrey containers can contribute to the customer-catching power of your products, we shall appreciate hearing from you.



CARR-LOWREY GLASS CO.

Factory and Main Office: BALTIMORE, MD. • *New York Office:* 500 Fifth Avenue • *Chicago Office:* 1502 Merchandise Mart

The Armstrong, the Bristol-Myers and the Schulte-Donald Deskey store designs of the future are indicative of what promises to be the greatest wave of store redesign ever seen in this country.

years. As a result they have paid their bills promptly and are now in much better financial shape than they have been for some time. The surest way to destroy this healthy situation is to load the retailer with too much merchandise, particularly of the substitute nature. The Wholesaler, because of his intimate knowledge of his customers requirements and his frequent contact with each of them can do himself and his trade an invaluable service if he preaches and practices restraint in selling effort rather than the pressure he normally puts on his sales organization. Better less now than nothing later.

"The Retailer's position has by this time become evident. He, too, will suffer if he permits any high pressure tactics to blind him to the inevitable reckoning that awaits overstocked shelves and unsalable merchandise. He may feel now that he can return any unsatisfactory merchandise for credit to his wholesaler or the manufacturer. This may be true in many instances, but in the majority of cases he will find no one to underwrite his own lack of foresight. He'll be holding the bag of slow-moving or dead stock with no money coming in with which to pay his bills."

Store Design

In its August issue, BEAUTY FASHION said that "department stores, chain drug and independent drug stores are making plans now for the greatest wave of store redesign and redecoration ever witnessed in retailing in this country. Estimates of what will be spent in post-war redesign vary widely but it will certainly run into hundreds of millions of dollars as retailers vie in making shopping and selling more attractive. The junky and just plain stuffy will be replaced by modern methods of display and of handling shopping traffic. The number of confidential design projects now being embarked upon is fantastic."

Since that was written, drug stores of the future have been popping in here at a great rate and we are showing three of them here. The first was done by Donald Deskey for D. A. Schulte, Inc., the second is a Bristol-Myers presentation, while the third is Armstrong Cork's version of what it should look like.

The Schulte job by Deskey features "a new '*saw-tooth*' arrangement of *alcoves*, providing more open visibility of merchandise displays than the traditional arrangement.

"The whole store itself is conceived as a display window along the entire street frontage. Individual, conventionally-framed street displays will be retained as interesting 'close-ups' in contrast to the general picture.

"The *recessed window* line invites a short-cut around the corner just out of the main traffic stream, thus inviting the potential customer to slow up and observe the display features. This arrangement permits construction of an 'island' display window at the corner, so designed as not to obstruct the main entrance.

"A *vanishing front* is achieved with a glass window section which lowers into the cellar when desired, permitting direct street access to the tobacco counter located just behind the window line.

"The plan also provides a *maximum* perimeter of *display* and stock space without the appearance of crowding or loss of continuity.

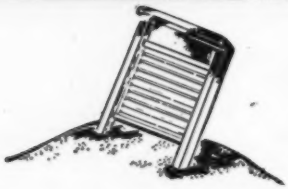
"*Rotary display* units are manually operated. By pushing the button, the customer can stop it to examine the stock more closely at eye level.

"*Indirect flood lighting* streams from concealed spaces above the rotary vending units, the island display window and the top of the saw-tooth alcoves. Low wattage and cold cathode units will carry the lighting through the glass window to the street face. The lettering along the top of the alcoves will be lightly set off in relief.

"For economical and uniform heat distribution, panel heating will be employed, requiring low velocity for an auxiliary air-change unit, thus reducing to a minimum the damage to merchandise from dirt and dust."

The Bristol-Myers proposal features "Smooth-flow" customer circulation. "The front or side windows provide mass or semi-mass merchandise displays. Alternate revolving and stationary glass or plastic shelves are utilized. Curved windows permit "smooth-flow" of sidewalk traffic.

The interior boasts "spacious aisles . . . open shelf stock arrangement . . . utility superstructure for open display of extra stock . . . concave and convex counter show cases . . . island displays for "smooth-flow" customer circulation.



SO THEY PERFECTED A "SAND LAUNDRY"

The persistent search for better glass leads research far afield

FINDING a needle in a haystack is child's play compared with finding and eliminating a few tiny foreign particles in a ton of sand. The research men at Armstrong's Millville glass factory faced this problem some years ago. Their reason for undertaking this project was that New Jersey sand, outstanding in most respects for glassmaking, contains a few impure particles in every ton which can discolor the glass. By removing these unwanted particles from each of the thousands of tons of sand used annually, they improve the quality of Armstrong's Glass.

Armstrong's research men and engineers first determined the relative size, weight, and number of the impure particles. Then they sought a way to remove them from the sand, economically and on a production basis. Nearly four years were spent in redesigning equipment that was doing a partial job. Finally the long, table-like apparatus, which has narrow strips running diagonally across it and which can be mechanically gyrated, was perfected.

When sand and water were fed in at the top corner, the strips and the gyrating action forced the impurities off the far end. The sand, separated from impurities, cascaded off the lower side. Thus the "sand laundry" became a fact!

This sand laundry, which made better glass possible, is only one of the many contributions made by Armstrong's glass chemists, engineers, and physicists to the science of glassmaking. Their patient, persistent work has been a major factor in making—and keeping—Armstrong's Glass top quality.

For further interesting information about the skilled men and women who make fine glass, write for your free copy of Armstrong's illustrated booklet, "Men and Glass." Address Armstrong Cork Company, Glass and Closure Division, 3809 Prince Street, Lancaster, Pennsylvania.

ARMSTRONG'S GLASS

and **ARMSTRONG'S CLOSURES**

The Cosmetic Trend

In discussing the late fall and winter outlook of cosmetic retailing the buyer of one of our large western store organizations recently made the statement to this writer that he expects considerable activity upon cosmetic counters in the near future, because of a general revival of the novelty interest on the side of the customers which, he believes, is matched by a corresponding trend among manufacturers to produce new items. While it is probably too early to express any opinion on this subject, there is little doubt that salesmen of the leading manufacturers have dropped frequent hints of late of novelty items in preparation. Buyers are looking forward to the appearance of some worth while article to help counters over the dead spot that some retail men are fearing for the tail-end of the war.

Counters could make use of some new ideas. A mere freshening of packages will not do, in the opinion of most buyers. However, packaging has other functions to fulfill than mere protection of the contents. Women will be responsive to a new type of lipstick applicator, a practical method to apply hair lacquer, a powder or talcum dispenser as part of the regular container. New packaging materials, eliminating some of the aggravations of the present day package, deserve study. There is a very definite demand for unbreakable containers for articles that are handled by children or in the bathroom. Space-saving containers might be an advantage and make for more sales; the purchases of toilet goods are definitely limited by the storing space available in bathroom cabinets and upon cosmetic shelves.

As to the contents, some buyers begin to wonder whether the time is not approaching where they must think of greater variety of their assortments. If the European war should end in an appreciable time there will be an early resumption of pre-war habits and methods of living. The returning service men will want their fling and social activities will expand rapidly. This will happen at the same time when relief from many war-restrictions can be expected. If present conditions follow the post-war pattern of 1918 women will want brighter shades of lipsticks, nail polishes, etc., more face powders, extravagant effects in make-up.

Buyers forsee a good market for articles with a new use-appeal of the type that brought their popularity to sulfonated oil shampoos, water-soluble creams, etc. It is admitted that these ideas do not come overnight. But there is no denying that the situation is wide open for a runaway, featuring either a new type of product, a new form of use or a new shade; even of the freak variety if it appears at the right moment.

In the meantime buyers keep their eyes open. Purchases are planned upon the presumption that supplies and demand will grow approximately at the same rate as during the past twelve months. Novelties will be given their chance. There are few buyers who have not a few dollars put aside for a quick try-out if an article should show real promise.

Soaped Cloth

More years ago than we care to remember we reported on an idea somebody had to market a disposable tissue or cloth impregnated with soap. We've heard no more of it since until this month when we received a note from Bob Busse of Charles F. Hubbs & Co., New York, a paper company, announcing the fact that the company was now producing a soaped cloth and expected to continue after the war.

A couple of us took one of the samples, a piece of loosely-woven cloth about three inches square and we each washed our hands with it. It lathered freely in cold water and even after both of us had used it, still appeared to have plenty of soap left for re-use.

Kid Stuff

It's not a toy, not a cosmetic, not an air purifier—then what is it? Jonthay, 244 Fifth Ave., New York, who carries "Parfums pour les petites," calls its novelty product a "nursery air refresher." It simply scents the air with fragrances created expressly for the very young, some of which are strongly reminiscent of candy and fruit. One is called a "Wick-in-Box," which is a jack-in-the-box idea. There are four interchangeable heads for the top of the bottle and when in use the heads are unscrewed and left hanging on the thick wick by which the air is then filled with the fragrance contained in the bottle. Then there is a Nursery Air Scent, a block on block idea, also with several interchangeable heads. For the older generation, Jonthay has "To Your Health," a sculptured hand on top of a block. The idea is the same—unscrew the hand and the air is filled with a floral scent. Maybe Jonthay ought to call its product a gay deceiver!

Counter and islands may be fitted with turntables. At rear is comfortable lounge adjacent to open prescription department. News flashes of current events are projected in lounge to while away time of customers waiting for prescriptions.

Armstrong's job is not described as a store of the future but as a "model" drug store. "The design is planned to step up the appearance of the store and the efficiency of the service. The major features of the design are: prescription department dramatized and located in a way that makes it the focal point of the store, with a waiting lounge for prescription customer's adjoining; a segregated department for baby supplies, cosmetics, or other groups of merchandise; flexible identification markers to direct customers quickly to the merchandise they want; raised counter-top displays; sound-absorbing ceiling which quiets noise, provides attractive surface, conceals air conditioning and indirect lighting; individually styled floor of linoleum to help departmentalize the store and give it smart, distinctive appearance. A portfolio, offered free by the Armstrong Cork Company, gives many additional ideas on drug store modernization."

Whitehall Pharmacal

Anacin, Bisodol and Hill's, Benefax and Freezone did about $25,000,000 among them in 1943, according to an announcement that American Home will combine them into a single operating unit called Whitehall Pharmacal. This puts all packaged drugs into one unit as American Home Foods and Boyle-Midway have already done with the organizations food and household products units.

A New Note

Something in the way of a new note in perfumes and packaging comes from the John P. Wilde Co., sole agent and distributor for Parfums d'Artimon. "Blue Peter" is the name of the line which includes three sizes of perfume, a four ounce eau de cologne, and a six ounce Lotion Vegetale for men. The name "Blue Peter" was inspired by the international code flag used for sailings and to recall ships. The slogan for Blue Peter perfume is "The perfume that signals 'Come Back.'" This will be the theme used at all times and in fact, is the intimate tie-up between the flag and the perfume. Blue Peter is also the name of a flower, a perennial of the family of Veronicas. Two clusters of coral pink flowers appear on the box. Blue Peter perfume comes in a bottle with grooves at its base which allow for the tying of decorative cords, white and gold, or the rigging which conveys a nautical note. This feature also makes possible the sealing of a screw top bottle. The wood stopper, a one piece design, camouflages a screw cap. The wood is oak and has been given a sandblast finish so that it has the appearance of having been waterlogged and weather beaten. The white marlin cord around the stopper with the square knot is a definite nautical note. A blue wax seal is used to fasten the loose ends of the cord. The stopper, cord and seal are a permanent decorative unit that do not have to be destroyed in the process of opening the bottle. The problem in packaging Blue Peter was to create a well balanced combination of feminine appeal together with the nautical motif, which from the appearance of the finished product, apparently proved no problem at all. The perfume will retail at: ½ oz. $7.50, 1 ounce, $12.50, and two ounces at $22.50. The eau de cologne will sell for $5 for the four ounces and the Lotion Vegetale for Men, six ounces, at $5.00.

Under Protest

The story of Leonid de Lescinskis, perfumer, appears to be the story of a man who does not want to make perfumes but makes them! Mr. de Lescinskis was an exclusive perfumer in Europe, but when he was blitzed out and came to the United States, he vowed never to touch perfumes again. However, one day, wishing to give his hostess something different, he made the mistake of concocting a perfume for her, and thereby hangs the tale. Mr. de Lascinskis' life has been changed ever since. His hostess "told" and from that time on he has had requests for more by interested females. And what could he do? Thus, from filling private social requests, in his laboratory, he is slowly but surely getting involved in a business that requires a factory and offices. And all this under protest! Nice work if you can get it . . .

Step into Beauty

Prince Matchabelli, Inc. has taken a step into the realm of beauty with its new Echo-tone make-up. This perfume house for years has had automatic lipsticks, crown-crested compacts, but with Echo-tone it has really placed itself in the cosmetic class. Echo-tone is a complete make-up consisting of lipsticks, face powder, rouge, eyeshadow, mascara and make-up foundation. The idea of Echo-tone is that each product, in its own range of color, is a harmony that echoes the underlying tone of the other. There are five foundation shades (both cream and liquid), eight lipstick shades, eight powder shades, four rouges (both cream and dry), seven eyeshadow tints, two mascaras. The lipstick, rouge, eyeshadow and mascara retail at $1, the foundation is $1.75 and the face powder sells for $1.50.

Styled BY MARYLAND

In your postwar packaging plans, consider these and new stock designs to come . . . bottles and jars in a wide range of sizes . . . which Victory will make available to new users of Maryland Glass.

MARYLAND GLASS CORPORATION, BALTIMORE 30 . . 270 Broadway, NEW YORK 7 . . Berman Bros., Inc., 1501 S. Laflin St., CHICAGO 8 . . H. A. Baumstark, 4030 Chouteau Ave., ST. LOUIS 10 . . J. E. McLaughlin, 401 Lock St., CINCINNATI 2 . . Owens-Illinois Glass Co., Pacific Coast Division, 135 Stockton St., SAN FRANCISCO 19 . . Aller Todd, 1224 Union Ave., KANSAS CITY 7 . . S. Walter Scott, 608 McCall Bldg., MEMPHIS 3.

Distinguished

Hazel-Atlas Opal Jars are famous for their packing efficiency, and, of course, lend distinction to any product.

HAZEL-ATLAS GLASS COMPANY
Wheeling, West Virginia

Parfums d'Artimon, for whom the John P. Wilde Co. is agent, is marketing a new fragrance, "Blue Peter," nautically packaged, in perfume, cologne and lotion vegetale for men.

Leonid de Lescinskis is gradually enlarging his perfume line. The set pictured contains Eau de Fleurs in the large bottle and No. 9 perfume. The combination retails for $9.50.

Perfect cosmetic gift package as described by the Army for Wacs contains powder, lipsticks, creams, cream deodorant, cream perfumes and colognes, dry perfume, hand creams.

Perfect Packages

Not bad, when a group of cosmetic manufacturers get their products into a war department photograph that represents the "perfect" Christmas packages for the members of the Women's Army Corps stationed overseas. Some of the fortunate ones in the photo appear to be Yardley, Barbara Gould, Tussy, and Elizabeth Arden.

Rocket Red Joins Cadet Corps

The United States Cadet Nurse Corps has officially chosen Lentheric's 'Rocket Red" lipstick and rouge as the match to the bright red trim of the Cadet Nurse's smart gray uniform. So, in the Corps' honor, Lentheric has packaged these two items in a red-lined box of gray and presented both the lipstick and cream rouge in gray plastic containers with a red Maltese cross motif. This set will be distributed to all leading Lentheric accounts during the month of September to coincide with the Corps' fall recruiting drive. It will be priced at $2. Lentheric is proud of the opportunity to pay honor to the gallant young women who are contributing so nobly to one of the greatest of all war needs.

Color Ideas

Revlon's newest color idea is an interesting one, which will be introduced to the consumer on October 1st. There will be a Pink Lightning lipstick shade, and an Intense Pink Lightning nail enamel color. These are two different shadings, yet both in the same color family. High-fashion, these two shadings are a vivid shocking fuchsia created to play up the two-tone high voltage colors favored for fall and winter. A new package has been created for this fall promotion. There will also be a Pink Lightning shade in Revlon's Wind-Milled face powder.

La Cross has tied its fall color promotion up with the movies. Casanova Brown, it is called, and was inspired by the title of the forthcoming motion picture Casanova Brown, starring Gary Cooper and Teresa Wright. The color selected by La Cross is designed to complement the lovely Casanova Brown fabric shade styled by A. D. Juilliard & Co. Store-wide color promotions will coincide with the opening of Casanova Brown in cities across the country.

These new shades are a promising sign of others to come!

Prince Matchabelli is entering the make-up field with Echo-tone make-up which includes Echo-tone lipstick, face powder, rouge, eye-shadow, mascara and make-up foundation.

The U. S. Cadet Nurse Corps has chosen Lentheric's "Rocket Red" lipstick and rouge as the best match for its uniform and Lentheric has turned out this red and grey set.

Revlon's Pink Lightning lipstick shade and Intense Pink Lightning nail enamel are two different shadings which are described as both in the same color family of fuchsia.

LOOKING INTO THE FUTURE

When you think of bottles think of

Swindell

Machine made and hand made glass containers for cosmetics, drugs and beverages.

SWINDELL BROTHERS, Inc. BALTIMORE, MARYLAND

200 FIFTH AVENUE, NEW YORK ROBERTO ORTIZ—HAVANA, CUBA

"tops"★

L. E. WATERMAN COMPANY
344 Hudson Street, New York, N.Y.
Postal Zone 13

CHICAGO
BOSTON
SAN FRANCISCO
MONTREAL

November 11, 1943

Mr. S. J. Klein, President
Empire Box Corporation
70 Outwater Lane
Garfield, N. J.

Dear Mr. Klein:

A purchasing agent can understand and appreciate the nervous emotional strain producers are subjected to in

Insofar as our relations with your company are concerned, we say you are "tops"★ when we think of folding cartons. You have always supplied us with an excellent box at the right price and produced them when and as needed. That, we think, is efficiency plus.

added greatly to your prestige as a manufacturer eager to serve others.

Empire workers have earned the thanks of the organizations you serve.

Very truly yours,
L. E. WATERMAN COMPANY
George Kovarner
Purchasing Agent

G.K.V.:R

Makers of the World Famous Waterman's Fountain Pens, Mechanical Pencils, Desk Sets and Writing Inks

EMPIRE'S SERVICE IS "TOPS" WITH A CARTON CUSTOMER

Number 1 of a series of "wartime" letters from old customers—many of them leaders in their field.

And... this is your opportunity to learn how Empire can serve you—*with service that is "tops."* Simply write, explaining your package needs.

Empire BOX CORPORATION

OFFICES: NEW YORK • CHICAGO • PHILADELPHIA • BOSTON • GARFIELD, N. J.
PLANTS: GARFIELD, N. J. • SOUTH BEND, IND. • STROUDSBURG, PA.

American Druggist

No time for double talk!

(AMERICAN DRUGGIST SEPTEMBER EDITORIAL)

There is an increasing amount of small talk, big talk, and maybe some double talk about saving "small business". It all sounds good, but how much of it applies to small business as represented by the neighborhood retailers?

It is just possible that some of the friends of small business are not sure what they mean by "small business". In fact, there are enough Washington interpretations of small business to confuse even the politicians.

For example, the Securities and Exchange Commission says that a small business is any firm of any kind that has less than $250,000 in assets. On this basis, a small steel plant or big super market would be classed as small business along with a neighborhood drug store. A more realistic interpretation is supplied by the Bureau of Labor Statistics which says in effect, "A business is small or big according to its own competition. In manufacturing, a small business is one that has less than the average number of employees for that kind of manufacturing. In retailing, a small business is one that has less than the average volume for its own class of trade".

Although none of the various definitions of small business enjoys common acceptance and use, any of them can be applied to retailing as well as manufacturing. But most of the wonderful orations about small business refer only to small manufacturers. Furthermore, any serious analysis of the more than two-million business firms in this nation will reveal that there are fewer than 185,000 manufacturers of all sizes but more than 1,300,000 small independent retailers.

Therefore, it sounds like some kind of double talk when a candidate for public office loudly proclaims his love for small business but says exactly nothing about small retailers. The small manufacturers richly deserve any help they are getting because of the job they have done in the wartime battle for production, but when the war ends, the battle for distribution will begin and small business as represented by independent retailers will be right in the middle of it.

What will happen to these neighborhood businessmen is something that all crusaders for small business should start thinking about, and the sooner the better for both the crusaders and the independent retailers.

John W. McFerrin

EDITOR

Packaging Advantages are PRODUCT ADVANTAGES too!

you'll see them in *seamless shatterproof*

Clearsite *

Literally hundreds of pharmaceuticals, drugs and drug sundries have been attractively packaged in shatterproof CLEARSITE vials. Scores of these items, in daily use, and hence carried about in pocket or handbag offer consumers the *extra* advantage of surviving accidental abuse.

That *shatterproof* feature means *added value* to users. The colorful labeling—offset directly on the containers in manufacturing process—affords tamper-proof, loss-proof instructions and lasting identity in addition to greater eye-appeal.

Why not ask our Packaging-Engineers for suggestions?

* Reg. U. S. Pat. Off.

ALSO CUSTOM MOLDERS OF INJECTION AND EXTRUSION MOLDED PRODUCTS

CELLUPLASTIC CORP.

CELLUPLASTIC CORPORATION

EXTRUSION AND INJECTION MOLDERS

60 AVENUE L NEWARK, N. J.

WEST COAST REPRESENTATIVES. CONTAINER SERVICE CO., 1266 North Western Avenue, Los Angeles 27, Cal.

The PROs and CONs of Wartime Sealing

. . . with

DODGE TAPER CORKS

PRO

1 Taper corks are dependable for the No. 1 closure job—providing an air-tight seal for your package.

2 Cork supplies are abundant—ample to fill all normal cork requirements *and to alternate for closures made of critical materials* . . . wood, metal, plastics.

3 Dodge taper corks are available in all standard sizes—are easily adapted to various styles of containers.

4 Dodge taper corks are uniform in quality . . . can be relied upon to run true to grade.

5 Dodge is a sure source for good cork closures . . . and prompt deliveries!

CON

1 Taper corks do not permit the degree of package styling or individuality which is possible with such closures as Dodge Milbossed Top Corks.*

2 Taper corks lack the convenient flange (also provided in Dodge Milbossed Top Corks*) which is preferred for certain types of packages.

**Until Dodge Milbossed Top Corks are again available in unlimited quantities, you can be sure of steady supplies of Dodge taper corks to meet your closure needs.*

Weigh these facts . . . then contact Dodge for Dodge taper corks.
(Send specifications.)

DODGE CORK COMPANY, INC., LANCASTER, PA.

DODGE CORK *Closures*

Designed to Guard the Integrity of the Contents

All Plastic

LIPSTICK CONTAINERS

Swivels..

ILLUSTRATIONS ACTUAL SIZE

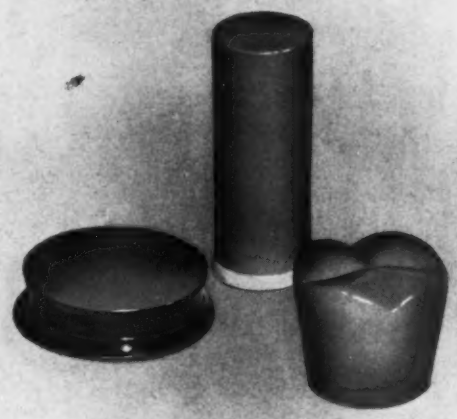
Push-ups..

HARRY BRODER
AND ASSOCIATES
5 EAST 47th STREET
NEW YORK 17, N. Y.
PLAZA 8-0520

WIRE OR WRITE FOR SAMPLES

CONTAINERS and CLOSURES

by Fontaine



The beauty and dependability of plastics and wood in perfume and cosmetic containers have been proven by the enthusiastic response to the Fontaine line.

The Fontaine Lipstick Container

A swivel-type, thermoplastic lipstick container with patented features, specially designed. The cover slips on and off smoothly and is held firmly in place by a small flange at the base. Two-color combinations, if desired.

Other Fontaine Products

Closures . . . Rouge Boxes . . . Perfume and Cosmetic Specialties . . . in a variety of designs, sizes, and colors . . . made to your specifications in catalin—or wood, if desired.

FONTAINE
PRODUCTS CORP.
Art in Plastics
306 EAST 61st STREET • NEW YORK, 21

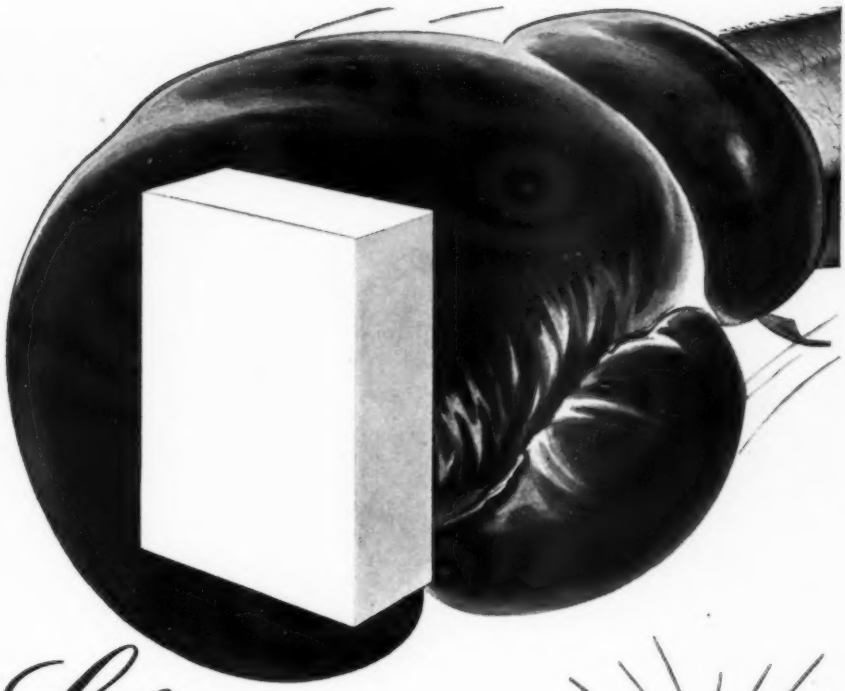
a new finishing technique

An exclusive development in the technique of lacquer spraying, created in our own laboratories, now provides a unique handling of your finishing problems. Designed for spraying wood, metal, plastics in any specified color, it is ideal for bottle caps, jar covers, compacts, and all types of specialty items for the cosmetic and perfume industry.

Our spraying department is at your service. *Write for detailed information.*

CONTAINER FINISHING
COMPANY
AN AFFILIATE OF FONTAINE PRODUCTS CORP.

1111 LEXINGTON AVENUE, NEW YORK, 21

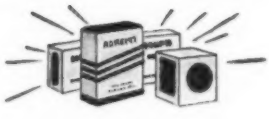


Coated Lithwite will put a punch into your postwar packages

When this brilliant paperboard is again available, you can package your products in folding cartons that carry greater sales wallop.

STREAMLINE OPERATION. *Coated* Lithwite is the original paperboard made and coated in one continuous, high-speed operation. Years of proved performance and constant improvement have led to widespread adoption of this revolutionary board.

UNUSUAL BRILLIANCE. *Coated* Lithwite's special mineral coating gives it an unusual whiteness and velvety feel. Colors hold up brilliantly, for there is little ink absorption. Fine engraving details come up sharply on this smooth, chalk-free surface.



SMOOTHER PRODUCTION. *Coated* Lithwite cartons click through high-speed filling machines with fewer jam-ups and leakers. For this unique board folds and scores accurately without shattering or flaking. Takes a tight, positive seal.

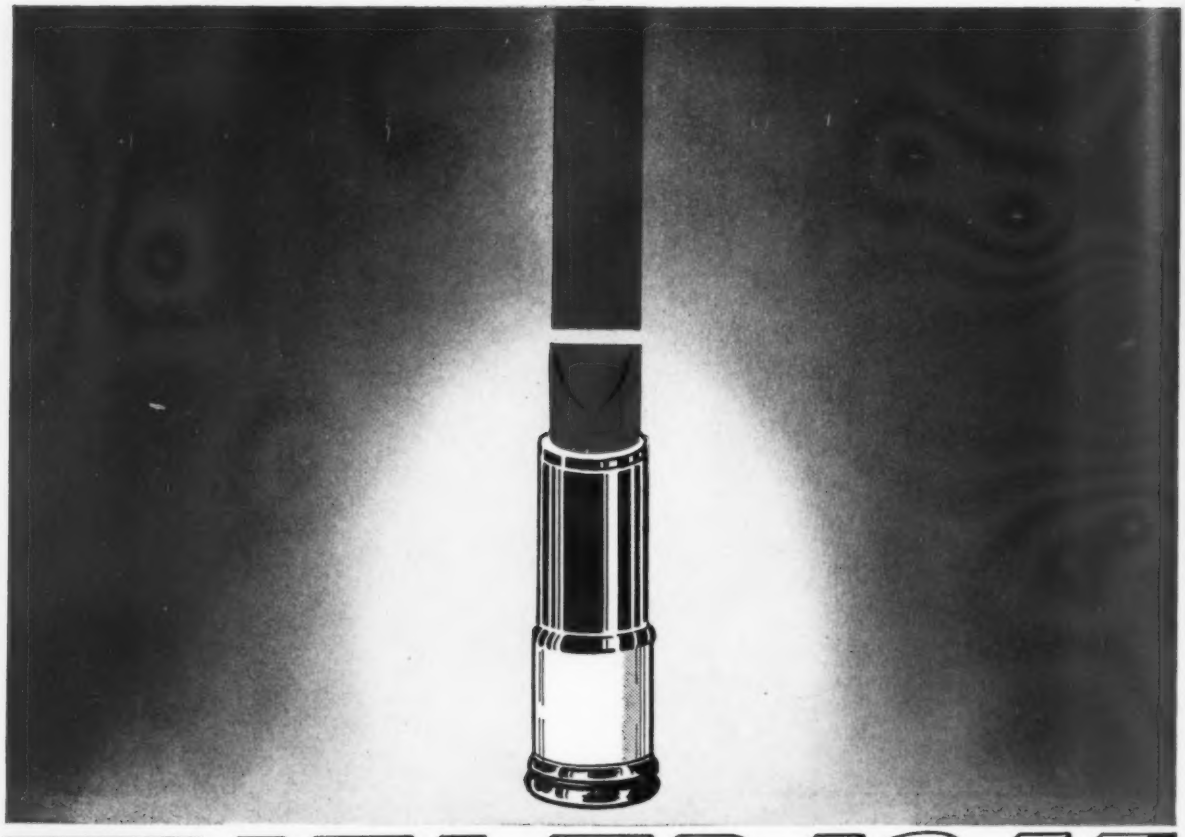
Due to wartime conditions, Gardner-Richardson cannot make additional commitments for *Coated* Lithwite. Not just yet. But the day is coming when this brilliant, time-proved paperboard will again be available to put extra punch into your packages, give your products an edge in the tough competitive battle that's coming after the war. Keep it in mind.

The GARDNER-RICHARDSON Co.

Manufacturers of Folding Cartons and Boxboard

MIDDLETOWN, OHIO

Sales Representatives in Principal Cities: PHILADELPHIA • CLEVELAND • CHICAGO • ST. LOUIS • NEW YORK • BOSTON • PITTSBURGH • DETROIT



HELFRICH

IS NOW IN A POSITION TO SUPPLY

LIPSTICKS

IN QUANTITIES HERETOFORE UNOBTAINABLE

WRITE OR WIRE FOR
FULL INFORMATION AND PRICES

WHAT HELFRICH PROMISES.....HELFRICH DOES

• HELFRICH LABORATORIES, INC., 564-570 W. MONROE ST., CHICAGO • HELFRICH LABORATORIES OF CANADA, LTD., 690 KING ST., WEST, TORONTO, ONT.
• HELFRICH LABORATORIES OF N. Y., INC., 151-163 WEST 26TH ST., NEW YORK • CABLE ADDRESS: HELFLABS, NEW YORK . . . CHICAGO . . . TORONTO

HELFRICH Laboratories

PHOTO - WESTERN ELECTRIC CO.

Life and Victory on the battlefront; increased production and improved quality on the homefront . . . all depend, in a large measure, on the *accuracy* of sensitive, scientific equipment. Protecting this accuracy enroute, is the important assignment entrusted to war-time packaging.

Among the multitude of packages manufactured by H & D, none had to be more painstakingly designed than the package to transport electronic tubes. The almost magic performance of these tubes is lost, if jarring falls or bumps disturb their high accuracy-quotient. So—for safe, undamaged arrival many of them make their journeys in H & D corrugated shipping boxes like those pictured above (licensed by Western Electric Company, Incorporated).

Today H & D is looking beyond the call of war-time duty. H & D Package Engineers are planning many packages for the peace-time pursuits of far-visioned customers . . . planning them with the great background of packaging knowledge accumulated in packaging for War. These men of the H & D Package Laboratories are ready *now* to help you prepare post-war packages that will protect and promote your products. Write for complete information.

Tells HOW TO PREPAK with Corrugated Boxes

Greater safety in shipment; better store handling service; reduction in over-all packaging costs; factory-fresh, undamaged merchandise for customers . . . these are the aims of H & D Prepak. The complete story is available in "How to Prepak in Corrugated Boxes." Get your copy by writing The Hinde & Dauch Paper Company, Executive Offices, 4477 Decatur Street, Sandusky, Ohio.

• • •

FACTORIES in Baltimore • Boston • Buffalo Chicago • Cleveland • Detroit • Gloucester, N. J. Hoboken • Kansas City • Lenoir, N. C. • Montreal Richmond • St. Louis • Sandusky, Ohio • Toronto

KEEP ON BUYING MORE WAR BONDS

For postwar packaging . . better see H&D **HINDE & DAUCH**

AUTHORITY ON PACKAGING . . . CORRUGATED SHIPPING BOXES

BRIDGEPORT...

For the past two years our facilities have been devoted almost exclusively to the production of war materials. We have been fortunate, in that we have been able to handle this work on the same equipment used for our regular peace time products, and, consequently, when material again becomes available for lipstick containers, vanity cases and other metal cosmetic items we will be prepared to start producing our regular line immediately. If you too are planning your post war program, we will be glad to assist you.

THE *BRIDGEPORT* METAL GOODS MFG. CO.

Established 1909

BRIDGEPORT 'PHONE: BRIDGEPORT 3-3125 CONNECTICUT

VANITY CASES • ROUGE CASES • PASTE ROUGE CONTAINERS • LIPSTICK HOLDERS (ALL TYPES) • POWDER BOX COVERS • EYEBROW PENCIL HOLDERS • BOTTLE CAPS • JAR CAPS • METAL NOVELTIES TO ORDER

STAINLESS STEEL STOCK POTS

ALL SIZES
5 to 50 GALLONS

READY FOR
IMMEDIATE SHIPMENT

IDEAL for STORAGE and PROCESSING PURPOSES

These are heavy duty vessels fabricated from 16 gauge, 18-8 Stainless Steel, Welded construction, with all inside welds ground smooth and polished. You will find many applications for these stock pots in your plant as they are very handy for storing and processing chemicals and drug materials. Will not rust or corrode and are very easy to keep clean.

SPECIAL EQUIPMENT

These stock pots are available with or without covers and may also be equipped with special casters if desired for moving them around your plant.

WRITE FOR COMPLETE SPECIFICATIONS AND PRICES

We also manufacture a Complete Line of STORAGE TANKS and EQUIPMENT.

METAL-GLASS PRODUCTS CO. Dept. D Belding, Mich.

LINE-UP FOR POST-WAR PACKING

TEAM UP YOUR PRODUCTS WITH

LUSTEROID

FOR MERCHANDISING THAT DISPLAYS AND PROTECTS

In planning your post-war sales strategy, it will pay you to put LUSTEROID to work as a full-fledged member of your sales organization.

These crystal-clear vials and tubes provide everything you could ask for in modern packaging technique.

LUSTEROID combines light weight and visibility with strength and rigidity that really protect your product while displaying it. You don't need protective packing. There are no labels to affix because your sales message can be reproduced colorfully on the LUSTEROID itself.

You have a wide choice of colors—clear or opaque—and sizes from ¼" to 1¼" in diameter with lengths up to 6". Cork, slip-on or screw-cap closures to complete the package.

Write for post-war details

LUSTEROID CONTAINER CO., INC.

Formerly Lusteroid Division of Silcocks-Miller Company

Office and Factory

10 W PARKER AVENUE MAPLEWOOD N J

MAILING ADDRESS SOUTH ORANGE N J

BEAUTY SELLS BETTER IN PLASTICS

YOU KNOW how much better cosmetics sell when they're showcased in shimmering plastics.

But perhaps (because after all, you don't live with plastics as we do) you *don't* know how many cosmetic manufacturers are planning postwar packaging now.

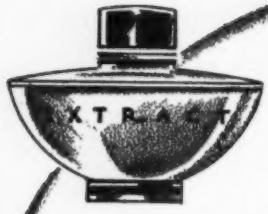
It will have to be "first come, first served," of course. Let's talk your problems over *now!*

Kurz-Kasch invented the screw-top Plastic Rouge Box—has been a big name in cosmetic packaging ever since. For containers for cream rouge, dry rouge, mascara, face powder or lipstick . . . for stock or custom molds . . . consult Kurz-Kasch.

KURZ-KASCH

For over 25 years Planners and Molders in Plastics

Kurz-Kasch, Inc., 1421 South Broadway, Dayton 1, Ohio
***Branch Sales Offices:* New York • Chicago • Detroit • Indianapolis**
Los Angeles • Dallas • St. Louis • Toronto, Canada
***Export Offices:* 89 Broad Street, New York City**



PERFUMES
for
EVERY PURPOSE

Write us fully concerning your requirements

Copy of latest catalog on request

ORBIS
PRODUCTS CORPORATION

215 PEARL STREET, NEW YORK - FACTORY & LABORATORY, NEWARK, N.J.

CHICAGO
660 North Dearborn St.

PHILADELPHIA
610 Brown Bldg.

BOSTON
89 Broad Street

LOS ANGELES
1807 E. Olympic Blvd.

MEMPHIS, TENN.
1620 Carr Ave.

Water Soluble Gums	Waxes	Cosmetic Raw Material	Fruit Flavors
Thymol	Stearic Acid	Oleo Resins	Food Colors
Aromatics	Essential Oils	Perfume Bases	Quince Seed
Rice Starch	Zinc Oxide French	Olive Oil	Irish Moss

NEWS

Dr. Hiebert Heads Stearns

The directors of Sterling Drug Inc. have elected Dr. J. Mark Hiebert as divisional vice-president and general manager of its Frederick Stearns & Co. Division in Detroit. He succeeds Erwin

DR. J. MARK HIEBERT

Fauser, who resigned as president of the Stearns company upon its acquisition by Sterling, June 30.

Dr. Hiebert has been with Sterling Drug since 1934. He was born in Hillsboro, Kansas, in 1904 and attended Tabor College, McPherson College and the University of Kansas. He received his M.D. degree from Boston University Medical School and from 1931 to 1934 served at the Massachusetts General Hospital and Massachusetts Memorial Hospital.

Dr. Richardson Joins Squibb Institute

Dr. Arthur P. Richardson has been appointed head of the division of pharmacology of the Squibb Institute for Medical Research, New Brunswick, N. J. Dr. Harry B. Van Dyke, formerly head of the division, has resigned to become head of the department of pharmacology at the College of Physicians and Surgeons, Columbia University. Dr. Richardson was formerly head of the department of pharmacology at the University of Tennessee Medical School.

Heyden Plant Gets Star

The Cherokee Ordnance Works plant operated by the Heyden Chemical Corp. at Danville, Pa., has been awarded a star to be flown with its Army-Navy "E" Flag in recognition of continuous excellence in war production.

Fisher Heads Anchor-Hocking

William V. Fisher has been elected president of Anchor Hocking Glass Corp., Lancaster, Ohio. He was formerly vice-president and general manager and has been associated with the company for twenty-five years. As president, he succeeds I. J. Collins who becomes chairman of the corporation, a newly established office. Mr. Collins has been president since the Hocking Glass Co. was founded thirty-eight years ago

WILLIAM V. FISHER

Cyrus L. Fulton, formerly assistant treasurer and assistant secretary, was elected treasurer and re-elected assistant secretary.

Other officers, all of whom have been re-elected, are: Thomas C. Fulton, vice-president and secretary, in charge of finances; B. E. Factor, vice-president, in charge of the tableware division; C. Dudley King, vice-president, in charge of the container division; R. P. Herrold, vice-president, in charge of the closure division, and F. B. Schlub, assistant treasurer and assistant secretary.

Amer. Home Names Brown Counsel

Thomas H. Brown, Jr., has been elected secretary and general counsel of American Home Products Corp., it has been announced by Alvin G. Brush, chairman of the board.

Mr. Brown, who will be in charge of legal matters for the parent company and its many operating subsidiaries, is a graduate of Harvard Law School and spent one year in general practice before joining American Home Products in 1937. He assisted in organizing the company's legal department and in 1942 was put in charge of that division.

Col. Martens on Price Board

The War Department has announced the appointment of Lieutenant Colonel William C. Martens as a member of the

LT. COL. W. C. MARTENS

War Department Price Adjustment Board. Col. Martens, who entered the Army as a Major in March 1943, was assigned to the office of the Under Secretary in the Renegotiation Division of the Army Service Forces. He was for many years the vice-president of Personal Products Corp., a Johnson & Johnson subsidiary.

Abbott Penicillin Book

"A Review of the Present Information Concerning Penicillin," a 112-page book has been prepared and published by the staff of the Abbott Research Laboratories, North Chicago, Ill. The book is generously illustrated with splendid photographs of penicillin production and is very attractively printed and bound. It contains chapters devoted to the discovery and history of penicillin; bacterial studies; penicillin and chemotherapeutic agents; effect of penicillin on resistant organisms; production; purification and properties; unitage; mode of action; pharmacology; clinical use; administration and dosage. Copies are available upon request.

. . at its new, *much* lower price . . helps you beat the Jasmin shortage

Even the soapmaker can afford Homo-Jasmone today — for improvements in the process and increased yield have made it economical to use in any required quantity.

This specialty of Albert Verley & Company is a notable addition to commercially available aromatics. Its true floral effect suggests at once the note of absolute Jasmin.

You can maintain the quality of your formulas and the prestige of your brands with Homo-Jasmone. Try it, and be convinced. Write for working samples and prices.

ALBERT VERLEY & COMPANY

Aromatics

232 EAST OHIO STREET, CHICAGO, ILLINOIS • 114 EAST 25TH STREET, NEW YORK • MEFFORD CHEMICAL CO., LOS ANGELES

Clinton Advanced by National Drug

E. R. Clinton, formerly vice-president in charge of sales, has been elected vice-president of the National Drug Co., Philadelphia. He has also been elected to the executive committee and the board of directors and was appointed

E. R. CLINTON

chairman of the research committee, it was announced by A. B. Collins, president of National Drug. Mr. Clinton joined the company in 1940 as sales manager.

Northam Warren, Jr. Promoted

Northam Warren, Jr., vice-president of the Northam Warren Corp., and formerly sales manager, has been promoted to the rank of major in the United States Army. He is stationed at Fort Benning, in the Field Artillery, in which branch of the service he has served since he entered the army as a reserve officer shortly after being graduated from Princeton. Major Warren is a member of the Field Artillery Committee at Fort Benning.

Smith Joins Standard Brands

J. Leonard Smith has been appointed west coast manager of the pharmaceutical division of Standard Brands, Inc. Mr. Smith has been associated with the Frank Gates Drug Stores in Kansas City, Mo., the Colgate-Palmolive-Peet Co., and from 1930 to his present appointment, with the Mennen Co. With Mennen he was district manager of the southeastern division with headquarters in Atlanta, manager of the south central district with headquarters in St. Louis and in 1939 he was appointed Pacific coast branch manager. Most recently he was the assistant sales manager in the home office.

In his new position, Mr. Smith will supervise consumer sales activities for the pharmaceutical division of Standard Brands, Inc., on the west coast.

J. T. Baker Buys Taylor Chemical

Announcement has been made that the Taylor Chemical Corp. with plant located at Penn Yan, N. Y., is now completely owned by J. T. Baker Chemical Co., Phillipsburg, N. J. The only item that the Taylor Chemical Corp. manufactures is Carbon Bisulfide. The plant is now running at full capacity with all production related directly or indirectly to the war effort. There will be no change in operating personnel.

Mechanical Handling in Phila.

Mechanical Handling Systems, Inc., Detroit, has opened a new office at 1224 Commercial Trust Building, Philadelphia 2, under the management of J. F. O'Hora. The company makes conveyorized manufacturing systems, engineered to the individual plant layout and arrangement.

Lt. Merck Again Cited

Lieut. George W. Merck, Jr., son of George W. Merck, president of Merck & Co., Inc., Rahway, N. J., has been cited by Admiral Chester W. Nimitz for gallantry in action in the South Pacific.

The citation which covers an action in that area late last fall explains that Lieutenant Merck, in charge of anti-aircraft guns on an escorting vessel, drove off a large number of Japanese dive and torpedo bombers while landings by American forces were being made by a task group. This is the second citation received by Lieutenant Merck, the first having been awarded him by Admiral Halsey for an earlier action during daylight and night mission to Japanese territory in the South Pacific.

LIEUT. GEORGE W. MERCK JR.

Dr. Sahyun—Stearns V. P.

The election of Dr. Melville Sahyun as divisional vice-president of the Frederick Stearns & Co. Division of Sterling Drug Inc., Detroit, has been announced by James Hill, Jr., president. Dr. Sahyun has been associated with

DR. MELVILLE SAHYUN

Stearns since 1934, first as director of biochemical research and since 1943 as director of research.

He was born in Beirut, Syria, in 1895, and received his B.A. degree from the American University at Beirut, where he then served as an instructor for three years. He received his M.A. and Ph.D. in biochemistry and physiology from Stanford University.

From 1923, when he came to the United States, to 1928 he conducted biochemical investigations on insulin and cancer at the Santa Barbara Cottage Hospital at Santa Barbara, Calif. For three years thereafter he was engaged in graduate work at Stanford University. In 1931 he was appointed research associate of the Food Research Institute of Stanford University.

Dr. Sahyun was a pioneer in work on insulin and on amino acids and has written and presented 48 scientific papers covering his research.

American Home Buys Dye Firm

The Marietta DyestuffsCo., Marietta, Ohio, has been acquired by American Home Products Corp. in an exchange of capital shares.

Founded in 1926, Marietta Dyestuffs has concentrated on the production of basic and acid colors and intermediates for the dye industry. The company's products are being expanded to include DDT which will be manufactured on a "duration of the war" license from Geigy, Inc., who patented the insecticide as a moth killer in 1939. American Home Products hopes to produce 200,000 pounds per month.

Standard Brands Appointments

William Finger, general manager of the drug and pharmaceutical division of Standard Brands, Inc., has announced the appointment of John LaWare as manager of the bulk products department and John W. Clissold as manager of consumer products department of the drug and pharmaceutical division.

WILLIAM FINGER

Both Mr. LaWare and Mr. Clissold have been sales managers of their respective departments and under the new executive set-up will broaden their functions to include also general administration and development plans. Mr. Finger will continue to supervise the over-all operation of the drug and pharmaceutical division.

Mr. Clissold joined Standard Brands in December, 1940. Mr. LaWare was formerly assistant director of research for the Borden Co. in the biochemical and biological laboratories.

Distributor of Parfums d'Artimon

The John P. Wilde Co. has been organized with offices at 475 Fifth Ave., New York, as sole agent and distributor for Parfums d'Artimon. John P. Wilde is general manager of the organization. He was formerly with the Caron Corp., for four years as New York sales representative, and for the past seventeen years he has been connected with Guerlain, the first five years as middle western representative, and the past twelve years as vice-president and sales manager.

Metasalts Plans Expansion

William Stieh, president of Metalsalts Corp., Paterson, N. J., has announced that the company has acquired the river-front property adjoining its present plant. The property will be used when the company puts into effect its post-war plan for new products, additional employment and expanded selling efforts.

Assoc. Distributors Leases Building

Lewis J. Ruskin, president of Associated Distributors, has announced the leasing of a five-story and basement building at the northeast corner of Illinois and St. Clair streets in Chicago. The company will occupy the whole building which contains 60,000 square feet and all of the research laboratories and offices will be moved to the new quarters. The company's present quarters will be used for manufacturing and warehousing.

Mr. Ruskin has also announced the appointment of David J. Maxin as director of merchandising research for Associated Distributors, Inc. and Dana Perfumes, Inc. Mr. Maxim was formerly drug merchandising director of H. W. Kastor & Sons Advertising Co.

David A. Large has joined the organization and will concentrate on the sales promotion of 5-Day deodorant pads. Mr. Large was formerly advertising manager of the Gates Rubber Co., Denver.

Bezard Joins Schiaparelli

Louis Bezard has been appointed production manager of Parfums Schiaparelli, Inc. Mr. Bezard, who was for many years director of art and purchases for Houbigant, will make his office at 6 West 48th St., production department of the firm.

R. M. Kadjar, formerly with Gourielli, Inc., has been appointed sales representative for the company in New England and on the east coast, including Virginia. Arthur Hadley is the new sales representative on the west coast. He was formerly sales and advertising manager of Wonderstoen.

Dr. Martin Heads National Research

Dr. Gustav J. Martin has been appointed research director of National Drug Co., Philadelphia, it has been announced by A. B. Collins, president. Dr. Martin was formerly assistant director in charge of the division of chemistry of the Warner Institute, New York. He is a member of numerous scientific societies and has published more than 50 papers in scientific journals.

Norwich Advances Woodburn

William D. Woodburn has been named manager of the northern sales division of The Norwich Pharmacal Co. In his new capacity, he will have charge of sales districts 1 and 2, with the assistance of R. Roy Wolfe, manager of district 2, and Stanley G. Rohrbaugh, manager of district 1.

Factor New York Buying Office

Max Factor & Co., Hollywood, has opened a buying office at 730 Fifth Ave., New York 19, under the management of Charles Francis Flynn.

The new branch will function exclusively as a buying office and will have no relationship with the sales or distribution of the company's products which will continue to be handled from the Los Angeles and Chicago offices of Sales Builders.

Parke, Davis Advances Loynd

Harry G. Loynd who has been engaged in sales promotion work for Parke, Davis & Co., Detroit, has also been appointed assistant to the president, Dr. A. W. Lescohier.

LeRoy P. Root, Scovill Manufacturing Co., guest of honor at a discussion of post-war American trade at the Advertising Club of New York with Eric Palmer, Sr., Cigar Institute public relations specialist, and Col. William H. Rankin.

POTASSIUM THIOCYANATE NF

now available! *

Baker's

CHEMICAL FORMULA: . . KSCN

DESCRIPTION: . . . . Colorless, transparent, hygroscopic crystals, odorless and having a saline taste.

ASSAY: . . . . . 99% +

SOLUBILITY: . . . . . 1 gram soluble in .5 cc water at 25° C
1 gram soluble in 12 cc alcohol at 25° C

SPECIAL CHARACTERISTICS: A product of synthesis—with unusually low indices of arsenic, heavy metal and iron impurities.

MEDICINAL USE: . . . . In arterial hypertension

* **AVAILABILITY:** . . . . Pharmaceutical manufacturers will be interested in knowing that we have completed new plant facilities, sufficient for the requirements of the medicinal trade. Potassium Thiocyanate is being synthesized from abundant raw material. We are completely removed from any dependence on the raw material which has previously limited productive capacity. The finished material meets the most exacting standards.

PACKAGES AND PRICE RANGE: . . . .

Barrels containing 225 lbs.	$.65 per lb.
5 barrel lots	.62 per lb.
Kegs containing 100 lbs.	.70 per lb.
Kegs containing 50 lbs.	.74 per lb.
Kegs containing 25 lbs.	.78 per lb.

F.O.B. Phillipsburg, New York or Philadelphia.

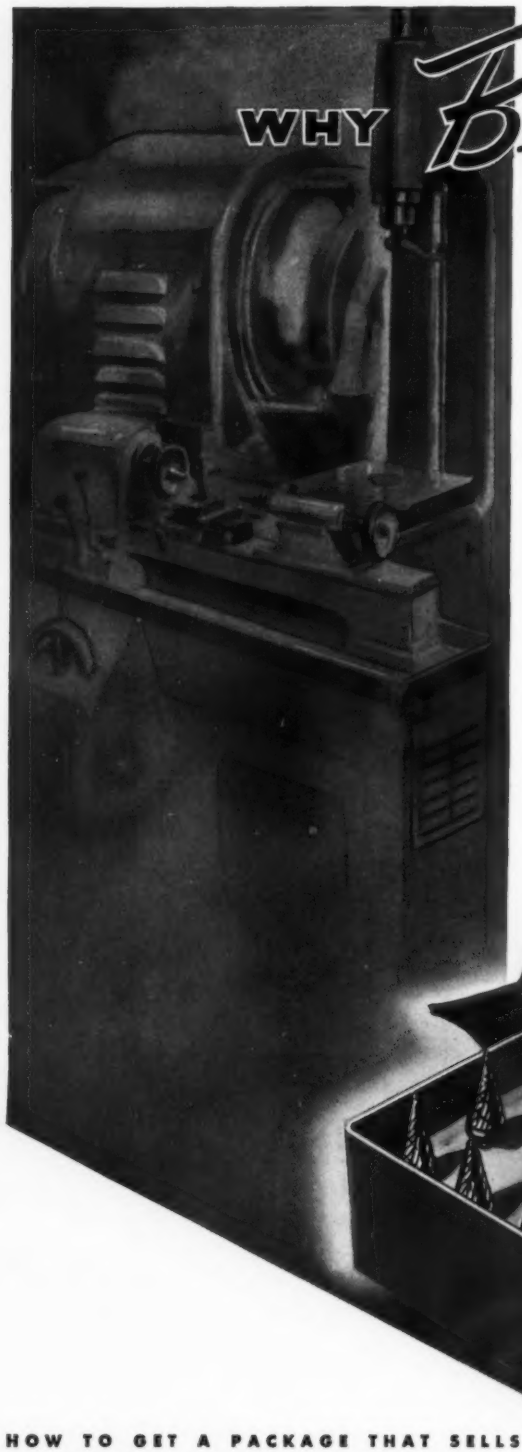
A test sample will be mailed upon request.

J. T. Baker Chemical Co., *Executive Offices and Plant:* **Phillipsburg, N. J.**

also available

- Potassium Thiocyanate CP
- Potassium Thiocyanate Technical
- Ammonium Thiocyanate CP
- Ammonium Thiocyanate Purified
- Ammonium Thiocyanate Technical
- Ammonium Thiocyanate Crude

Baker's fine chemicals



WHY *Beauty* IN INDUSTRIAL PACKAGES?

MANUFACTURERS of *consumer* products for many years have recognized beauty—as a selling force. Auto manufacturers—for example—very wisely spent fortunes to give their models eye-appeal.

But beauty—*it was thought*—could NOT sell industrial products. Then—smart manufacturers began streamlining dynamos, lathes, punch presses, motors, compressors, gas engines, and . . .

—the industrial world changed!

For whenever better *or even equal* in efficiency, the new *better-looking* machines SOLD! And so well—that *modern equipped* factories resemble little the plants of ten years ago.

Beauty—it is clear—influences people's choice in EVERYTHING! That's why *industrial* merchandisers now insist on *attractive industrial packages.*

That's why in every package by Ritchie—whether it contains rotary files or a scented face powder—you will always find, in its lines, in its proportions, color or general design, a strong eye-pleasing quality . . . elements of beauty.

Attractive, practical, tamper-proof package created for M. A. Ford Manufacturing Co., Inc., Davenport, Iowa. Gummed flaps of cover turn under and seal to bottom. Unique nesting of tools prevents damage to cutting edges.

HOW TO GET A PACKAGE THAT SELLS

Let Ritchie design a package for you and it will have beauty *more than skin deep.* It will have the right material and structure for its job. It will be practical, convenient to use, easy to handle, easy to stack and display. It will proclaim your product-identity. It will be memorable and attractive. And Ritchie's expanded, war-developed facilities for volume production assure its low cost. Let Ritchie demonstrate how *you* can get a better selling package. No obligation. Write us today.

W. C. *Ritchie* AND COMPANY

8828 BALTIMORE AVENUE • CHICAGO 17

Set-Up Paper Boxes • Fibre Cans • Transparent Packages

NEW YORK • DETROIT • LOS ANGELES • ST. LOUIS • MINNEAPOLIS

PACKAGES BY RITCHIE PROVE THAT BEAUTY SELLS

Clark and Ewald Head Allied Products

John A. Ewald, vice-president and general manager in charge of sales of Allied Products, Inc. and its affiliated companies, Avon Products, Inc. and Avon Products of Canada, Ltd., has been elected president of all three companies. He has also been elected president of Technical Laboratories, Inc. He succeeds the late David H. McConnell.

JOHN A. EWALD

Mr. Ewald who is a director of the National Association of Direct Selling Companies, has been with the company for twenty-five years, in the New York office since 1929, and for ten years before that as manager in Kansas City.

W. VanAlan Clark, formerly vice-president of the company, in charge of production, has been elected to the newly created post of chairman of the board for all three companies.

E. Hall Faile, a director for many years has been elected to the newly created position of chairman of the executive committee which consists of Mr. Faile, Mr. Clark, Mr. Ewald and J. S. Stone.

Russell Rooks, assistant general sales manager, was elected vice-president of Allied Products, Inc., Avon Products, Inc., and Avon Products of Canada.

Dr. Katz Heads FEMA Committee

Dr. Alexander E. Katz, president of the Florasynth Laboratories, Inc., has been appointed chairman of the scientific research committee of the Flavoring Extract Manufacturers Association.

Western Trading Changes Name

Western Crude Drug Co., Inc., is the new name of the company formerly known as Western Trading Co. of Portland, Ore. There is no change in ownership or management and the company will continue as first hand producers and suppliers of West Coast botanical products.

William H. Haupert is president.

Amer. Home Proprietary Subsidiary

Unification of five subsidiaries in the packaged drug division of American Home Products Corp. into a single operating unit, named Whitehall Pharmacal Co., has been announced by Walter F. Silbersack, executive vice-president and general manager of the corporation.

The companies included are: the Anacin Co. (Anacin Tablets and Benefax Vitamins), the Kolynos Co. (tooth powder and paste), the BiSoDol Co. (BiSoDol powder and mints), the Larned Corp. (Hill's Cold Tablets, Hill's Nose Drops, and Freezone), and the Anacin Manufacturing Co. They will retain their present trade names but all management functions are being consolidated. In 1943, the five units combined to do about $25,000,000 or 28 per cent of the corporation's gross volume.

Whitehall Pharmacal Co. has plants in Knoxville, Tenn., and New Haven, Conn.; six warehouses are located in Jersey City, Dallas, Knoxville, Chicago, Los Angeles and San Francisco.

Martin Labs. Packages Cold Waves

Martin Laboratories, New York, is now packaging cold wave lotions, complete in every respect, and ready for distribution under private label.

Fanning Honored

In celebration of his 25th anniversary with N. I. Malmstrom & Co., New York, a dinner was given to Frank G. Fanning by Mr. Malmstrom at the Stockholm Restaurant, September 7. Mr. Fanning who joined the firm at office boy age, is now partner and sales manager of that company. He is also the president of the Salesmen's Association of the American Chemical Industry.

FRANK G. FANNING

Sander Handling Grove Exports

Harry Sander, for the past ten years production and export manager of Grove Laboratories, Inc., St. Louis, has been relieved of his duties as production manager to devote his entire time to the rapidly expanding export department. For six years before joining the company he represented the Forhan Tooth Paste Co. in South America as production manager. Mr. Sander is currently on a trip to Mexico, Columbia, Venezuela, Panama, Cuba and Puerto Rico, in the interest of expanding Grove's Latin American sales.

HARRY SANDER

Heidbreder Back at Office

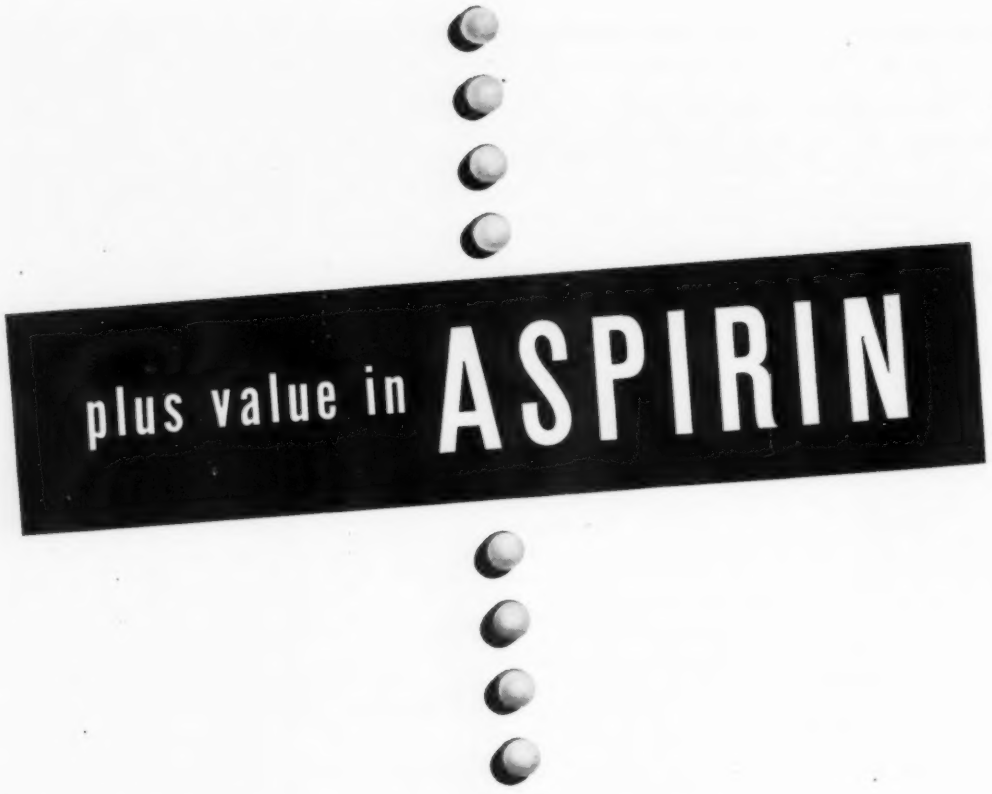
George H. Heidbreder, vice-president and general manager of Helfrich Laboratories, who has been confined to the hospital following a serious accident last December 29, is slowly but surely recovering. Mr. Heidbreder, who has been carrying on his business activities from the hospital, wrote us last month as follows:

"You are possibly interested to know that my hip is rounding into shape satisfactorily, that I will get my artificial leg next week and then will come the big test of whether or not my hip will support my weight which has now shrunk to less than 150 pounds."

The last week in August Mr. Heidbreder phoned us from his office in Chicago—back on the job.

Plough Buys Major's Cement

Plough, Inc., Memphis, has purchased the sixty-eight-year old Major's Cement from Major Manufacturing Co., New York. The addition of Major's Cement to Plough products is in line with the firm's policy of adding from time to time, sales proven, fast turnover, popular priced products that have daily uses in every home. Major's Cement becomes the 126th Plough product.



When Monsanto is your regular supplier of acetyl salicylic acid, you get *more* than just aspirin.

You get *dependable quality*, the result of planned research, strict plant control and constant laboratory checking.

You get *service that you can rely upon*, for it has been a long-standing policy of Monsanto representatives to make only promises that can be kept.

Why not place your next order with Monsanto?

MONSANTO CHEMICAL COMPANY, Organic Chemicals Division, 1700 South Second Street, St. Louis 4, Missouri. District Offices: New York, Chicago, Boston, Detroit, Charlotte, Birmingham, Los Angeles, San Francisco, Seattle, Montreal, Toronto.

ACETYL SALICYLIC ACID, U.S.P.

Standard Forms: 20-mesh crystals, 40-mesh crystals, 80-mesh powder.

ACETYL SALICYLIC ACID, Starch Granulations

Standard Forms: 10%, 12-50 mesh, white; 16%, 12-50 mesh, white; 20%, 12-50 mesh, white; 10%, 12-50 mesh, pink; 10%, 12-50 mesh, green. *Specifications:* (Made with Acetyl Salicylic Acid U.S.P.) White, pink or green granules. Assay: starch granulation 10%, 90.0% min. — 91.0% max.; starch granulation 16%, 84.0% min. — 85.0% max.; starch granulation 20%, 80.0% min. — 81.0% max. Free salicylic acid conforms to U. S. P. test on Acetyl Salicylic Acid.

MONSANTO CHEMICALS
SERVING INDUSTRY...WHICH SERVES MANKIND

Frankfurter in Latin America

Otto N. Frankfurter, director of exports for Heyden Chemical Corp., New York, left August 25 for his annual trip to Latin America. He will travel by air and expects to be away for about three months.

Scroll to A.Ph.A. for Quinine

In recognition of the service of American pharmacists in contributing their quinine stocks to a national pool for the armed forces, the War Production Board has awarded a scroll of appreciation to the American Pharmaceutical Association, the collecting agency.

The presentation was made at the American Institute of Pharmacy by two pharmacists of the War Production Board, Fred J. Stock, chief of the Drugs and Cosmetics Branch of the Chemicals Bureau, and Henry W. Heine, chief of the Botanicals and Imports Unit of the Drugs and Cosmetics Branch of the Chemicals Bureau. The pharmacists were co-signers of the scroll with Donald M. Nelson, WPB chairman.

More than 152,000 ounces of cinchona products were collected.

Lueders Names Condie in Ontario

F. J. Lueders, president of George Lueders & Co., has announced the appointment of Robert Condie as representative for the company in Ontario. He will make his headquarters at 21 King Street, East, Toronto.

ROBERT CONDIE

Mr. Condie was attending the University of Edinburgh in 1914 when he joined the British Army. After leaving the army as a captain in 1918 he resumed his studies and was graduated as a pharmaceutical chemist in 1921. He was formerly chemist and general manager of Llewellyn & Co. in Shanghai, China, and of Allen & Hanbury, Lindsay, Canada.

Lemke Propylene Glycol Booklet

B. L. Lemke Co., New York, has issued a booklet dealing with its Propylene Glycol N.F. It gives technical and general information on the product and discusses its use in the pharmaceutical, food, flavoring, cosmetic, tobacco and other industries. Copies are available upon request.

Winthrop Advances Dr. Lasersohn

Dr. Martin Lasersohn, formerly medical director of Winthrop Chemical Co., has been appointed assistant to the president, and elected assistant treasurer of the company, it has been announced by Dr. Theodore G. Klumpp, president. Dr. Lasersohn has also been elected secretary of Fairchild Bros. & Foster, a Winthrop subsidiary. For six years before joining Winthrop he was a

DR. MARTIN LASERSOHN

member of the faculty of the Medical College of Virginia, Richmond.

Born in St. Louis in 1897, Dr. Lasersohn received his B.S. at Washington University, St. Louis, and his M.D. at its School of Medicine in 1922.

M. M. & R. Fellowship

Magnus, Mabee & Reynard, Inc., through Percy C. Magnus, president, and the Philadelphia College of Pharmacy and Science, through its president, Dr. Ivor Griffith, have announced the creation of a fellowship in volatile oil research at the latter institution. The research has been assigned to the department of pharmacy and will be conducted by Dr. Austin A. Dodge, assistant professor of pharmacy, who was for several years associated with the late Dr. Edward Kremers.

The fellowship was instituted in memory of the founder of Magnus, Mabee & Reynard, Inc., the late Percy Cecil Magnus, who at one time attended classes at the old Philadelphia College of Pharmacy.

Dr. Wellman Joins Greeff

Dr. Victor E. Wellman is now associated with R. W. Greeff & Co., Inc., New York, as a technical sales executive.

DR. VICTOR E. WELLMAN

Dr. Wellman was formerly associated with the B. F. Goodrich Co. as director of purchases of the chemical division and, previous to that, as manager of the general laboratory. He holds a Ph.D. degree in physical chemistry from the University of Washington at Seattle.

d'Orbessan of Lilly Engaged

Announcement has been made of the engagement of Dr. Eleanor Hayden of the Army Ground and Service Forces Redistribution Station, Lake Placid Unit, to Fernand M. d'Orbessan of New York.

Mr. d'Orbessan was in the army, attached to the 79th General Hospital and is now associated with Eli Lilly & Co., Indianapolis.

Martin Buys Tylon Interest

Harry Martin, president and founder of Martin Laboratories, has announced that he has purchased Jack Ashford's interest in Tylon Products, Inc., New York, and that Mr. Ashford is no longer connected with the company.

Hooker Chlorine Products Bulletin

Hooker Electrochemical Co., Niagara Falls, N. Y., has prepared a new technical bulletin No. 328A upon the uses of its chlorinating agents—Chlorine, Sulfur Chlorides (mono- and di-), Sulfuryl Chloride, Thionyl Chloride, Hydrogen Chloride, and Phosgene (Carbonyl Chloride). The bulletin gives a summary of the most important aspects of the use of chlorine and its derivatives in the production of organic compounds and furnishes bibliographies on each of the chlorinating agents. Copies are available upon request.

Schering Sales Appointments

Arthur F. Peterson, manager of the domestic sales division, Schering Corp., Bloomfield, N. J., has announced the appointment of division managers of its eastern, central, southern and western divisions.

Herman W. Leitzow of St. Paul, Minn., a graduate of the College of Pharmacy, University of Minnesota, is

HERMAN W. LEITZOW

manager of Schering's eastern division. He will make his headquarters at the firm's home offices in Bloomfield, N. J.

Carl H. Suding of Indianapolis, graduate of Indianapolis College of Pharmacy is manager of the central division with headquarters at Chicago.

James D. Booth of Atlanta, Ga., graduate of the Philadelphia College of Pharmacy and Science, and the College of Pharmacy of the Medical College of the State of South Carolina, is manager of the southern division with headquarters in Atlanta.

Franklin K. Johnson, graduate of the College of Pharmacy, University of Minnesota, is manager of Schering's western division with headquarters at San Francisco.

For several years these men have been with Schering as professional service representatives.

Stanton in Benjamin Franklin Inst.

Michael Stanton, director of Stanton Laboratories, producer of various thioglycolate compounds, has been elected a member of the Benjamin Franklin Institute of Philadelphia.

Crowe Joins Heyden

James M. Crowe became associated September 1, with Heyden Chemical Corporation in charge of advertising and publicity. For many years Mr. Crowe has held the position of managing editor of "Chemical Industries," which position he resigned to join the Heyden organization.

Upjohn Duplicates Grant

The Upjohn Co., Kalamazoo, Mich., has duplicated its 1943 grant of $5,900 to the Industrial Research Institute of Iowa State College for a study of better methods of penicillin production.

Kish Joins Trade Laboratories

Trade Laboratories, Newark, N. J., has appointed Dr. Albert C. Kish its chief chemist. He will be in charge of research and development work and in control of raw materials and finished products. Dr. Kish is a graduate of the University of Budapest and has spent the past ten years in private research, with particular emphasis on shaving preparations.

Fletcher Heads Ross Engineering

S. W. Fletcher, for many years executive vice-president of the J. O. Ross Engineering Corp., has been elected president of the company. He will continue to make his headquarters in New York

S. W. FLETCHER

and A. E. Montgomery will continue as vice-president with his headquarters in Chicago. Other officers of the company are: vice-presidents, H. G. Rappolt and F. W. Partsch; treasurer, J. A. Donder; secretary, R. W. Grott.

Isopropyl Neutralizer

A new neutralizer for isopropyl alcohol, Neutralizer 1A No. 1, has been announced by Magnus, Mabee & Reynard, Inc. This product is said to depress the objectionable odor of isopropanol without perfuming. The company has also announced a new perfuming principle for insect spray toxic agents, known as Perfume Oil Fruit Berry MM&R. This product is said not only to neutralize the odor of toxic agents but to impart a truly refreshing fragrance of uncommonly light character. Samples of these new products are available upon request.

Obituaries

David Hall McConnell

David Hall McConnell, president since 1936 of Allied Products, Inc. Avon Products, Inc.; Hinz Ambrosia, Inc.; Technical Laboratories, Inc.; and California Perfume Co., Inc., died at his summer home in East Hampton, L. I., August 5. He was forty-two years old.

DAVID HALL McCONNELL

California Perfume Co., Inc. was the name under which his father, David Hall McConnell, Sr., went into business in 1886. Mr. McConnell became associated with his father immediately following his graduation from Princeton in 1923 and was executive vice-president at the time of his father's death in 1937.

He is survived by his wife, Therese Meiris McConnell, and two sons, David Hall McConnell, 3d, U.S.M.C. and Neil Anderson McConnell.

Philip E. Hill

Philip E. Hill died at his home in Surrey, England, August 15 after a brief illness. He was seventy-one years old.

Mr. Hill figured in a number of spectacular real estate deals. In 1927 he purchased the large estates of Lord Derby, valued at more than $10,000,000, in Liverpool, Bootle, Kirkdale and Walton. Soon afterward he turned over the properties to a company then known as Beecham Estates and Pills, Ltd., and received in part payment the Beecham pill business. He was chairman of Eno Proprietaries, Timothy White's and Taylor's, Veno Drug Co., and Scribbans & Co., also the Beecham Maclean Holdings, Macleans, Covent Garden Properties and R. Hovenden & Sons.

Charles H. Kammann

Charles H. Kammann, president of Ste. Genevieve Lime Co., St. Louis, Mo., died at his home in Belleville, Ill. July 23.

ADVERTISEMENT—*This entire page is a paid advertisement.* *Prepared Monthly by U. S. Industrial Chemicals, Inc.*

U.S.I. CHEMICAL NEWS

September ★ A Monthly Series for Chemists and Executives of the Solvents and Chemical Consuming Industries ★ 1944

Postwar Cosmetics Seen as Big Users of U.S.I. Chemicals

Indalone and BK-5 as well as standbys like ethanol expected to find many new applications

Just about the first postwar idea in every cosmetic manufacturer's mind is to get back to *prewar* raw materials. Substitutes for ethyl alcohol and other cosmetic ingredients have rendered indispensible service in extending the available supplies of these war-scarce chemicals. But the inherent advantages of ethyl alcohol, for example, will make the return of unlimited supplies a significant event to the industry. In addition, of course, many manufacturers have new products ready, waiting for ethyl alcohol and other chemicals to produce them.

New Products Coming

Among the more interesting new products now in prospect, are modifications of the suntan lotions and insect repellents which made such rapid strides just before the war. Precisely what these products are, manufacturers naturally do not reveal. In the field of insect repellents, however, it is certain that wide use will be made of the knowledge gained in developing insectifuges for our armed forces. The government's new all-purpose repellent, in which U.S.I.'s Indalone is a vital ingredi-

(*Continued on next page*)

New Solvent Blend Gives Better Primer Adhesion

According to a leading process engineer, a mixture of hydrocarbon solvents, such as toluene and xylene, with alcohol in the ratio of two parts to one is most efficient in cleaning surfaces prior to the application of the zinc chromate primer coat. This mixture flashes off the surface quickly and leaves no residue, while the alcohol content is great enough to remove any moisture.

He also states that this mixture has an added application in cleaning the primer coat before the final finishing coat is applied. While it will not remove the primer without abnormal rubbing, it softens it sufficiently to improve the adhesion of the finish coat.

New Foam Insulation Saves Space, Weight

A new, phenol-resin foam plastic insulating material, which weighs only two pounds per cubic foot, is lighter and lower in heat conductivity than rock wool, glass fibre or cork. Its present war uses are secret, but it promises to have many peace time applications because of its self-raising and self-curing properties. The new foam plastic should find special favor with designers of modern prefabricated houses, refrigerators, automobiles and other products, where low-weight, high-efficiency heat insulation is desired.

The director of the laboratory which developed the new insulation explained, "It just grows all by itself. It will foam to 30 times its own size, that is, a quart can of the mixture will expand sufficiently to fill a 7 to 8 gallon receptacle in about 10 minutes. What little heat is required is generated by the mixture itself."

The new product, which resembles molasses in appearance, will begin to foam and expand within a maximum of five minutes after the mixing stops. It cures itself without application of heat or any further attention.

Longer-lived Catalysts For Nitrile Production

In producing nitriles from primary alcohols and ammonia, copper catalysts rapidly lose their effectiveness. Yields range from 80 down to 40 per cent. Two newly patented processes are claimed to increase yield by boosting the activity and stability of the catalyst.

The new processes involve the use, as catalyst, of either reduced silver, reduced copper or, better, a mixture of the two deposited on a partially dehydrated amorphous oxide of aluminum, zirconium, thorium, or other rare earth metal. The latter serves as a dehydrating agent.

While the new catalysts lose effectiveness, they do so much less rapidly than copper alone. Further, they may be reactivated readily by passing air over the catalyst at the temperature of reaction. This is followed by treatment with hydrogen to restore the oxides to the metallic form.

Among the alcohols readily converted to nitriles by this process are n-butanol and ethanol.

U.S.I. Expands Line of Modified Alkyd Specification Resins

New S&W War Resins Well Suited for Government Agency Coatings

Supplementing its announcement of Aroplaz 1375 in the August issue of CHEMICAL NEWS, U.S.I. now announces eight additional Aroplaz resins in which phthalic anhydride content has been adjusted to meet current War Production Board restrictions. The comparative specifications of all nine resins are shown in the box below.

All of these resin vehicles have been designed to help manufacturers to formulate government agency specification finishes at minimum raw-material cost, and with no sacrifice in quality.

Army specification 3-183 requires S&W Aroplaz 1365 blended with S&W Fused Congo No. 5, while Quartermaster Corps specification CQD-200A requires S&W Aroplaz 1205-H. Specification CQD-65B is met with S&W Aroplaz 1130 blended with either urea or melamine.

31.5% Phthalic Content Resins

S&W Aroplaz Resins 1323L, 1323D and/or 1333 will be found eminently satisfactory for producing coatings to meet Army specifications 3-177, 3-178, 3-181 and 3-187, Engineer Corps specification T-1760, and Federal specification TT-E-485.

24% Phthalic Content Resins

A maximum phthalic anhydride content of 24 per cent has been set up for Bureau of Ships specification 52R13 and Maritime Commission specification 52MC21—both for alkyd-resin solutions. These government specifications are met by S&W Aroplaz 1240 and 1244 respectively.

16% Phthalic Content Resin

Use of Aroplaz 1375 in the Army and Navy replacement specifications where alkyd resins not exceeding 16 per cent phthalic anhydride content are permitted, was discussed in detail in the August issue of CHEMICAL NEWS.

RESIN SPECIFICATIONS

S&W AROPLAZ	Solution	Visc. G. H.	Acid Value of Solids	Color (GH 1933)	Lbs./Gal. at 20°C.	Phthalic Anhydride Content	Oil Content
1130	60% in Xylol	Z3-Z5	4-6	5-8	8.5	38	40.5
1205H	50% in HSN	Z4-Z5	6-12	7-10	8.0	30-31.5	37
1240	70% in MS	Z-Z1	6-10	6-8	8.0	23-24	64
1244	70% in MS	Y-Z1	6-10	7-12	8.0	23-24	65
1323 Lt.	50% in MS	Z-Z2	5-10	5-10	7.65	30-31.5	54.5
1323 Dk.	50% in MS	Z3-Z4	5-10	16-18	7.70	30-31.5	54
1333	50% in MS	U-W	5-10	5-10	7.65	30-31.5	54.5
1365	60% in Xylol	Z-Z2	18-25	6-9	8.5	38.5	45.5
1375	50% in MS	S-V	12-18	16-18	7.65	15-16	56

ADVERTISEMENT—*This entire page is a paid advertisement.*

September ★ **U.S.I. CHEMICAL NEWS** ★ 1944

Ups Color Fastness of Printed Textiles

Claimed to be resistant to dry cleaning solvents and other detergents, a new pigmented lacquer-in-water emulsion printing paste has been patented for use in the printing of textiles.

The new product employs a lacquer-in-water emulsion containing a pigmented base. The base includes a urea-formaldehyde resin in a solvent consisting of xylol and butanol, resins, and pine oil. Before use, paste is dispersed in a neutral base made from water, resins, and methyl cellulose.

Stabilizes Halogenated Compounds with Acetone

According to a recent patent, halogenated ketones, such as iodoacetone and bromoacetone, can be stabilized with a water-miscible solvent so that the halogen is retained until the compound comes in contact with water. Among the solvents mentioned for this use are acetone and ethyl acetate. It is claimed that this stabilization increases the utility of these halogen compounds as germicides, fungicides, etc. One use suggested for them is the treatment of ships hulls to prevent fouling.

Citrus Pectate Pulp Solves A Synthetic Rubber Problem

Unlike natural rubber, the synthetic product has a decided tendency to adhere to paper and to flow. As it is shipped from manufacturing to process plants in paperboard boxes, or multi-wall paper bags, this tendency to stick to paper greatly complicates its packaging and handling.

A film of citrus pectate pulp in an aqueous dispersion containing some sodium phosphate applied to the paper container, is reported to solve this problem. The film adheres lightly to paper, strongly to synthetic rubber. When package is emptied, the film pulls cleanly from the paper, and carries through with the rubber as a minute, and entirely innocuous constituent.

Postwar Cosmetics

(*Continued from preceding page*)

ent, provides one excellent example.

In the field of sun-tan lotions it is equally certain that wide use will be made of BK-5, U.S.I.'s light-screening compound. Bright prospects, too, are envisioned for combination suntan-insect repellent products utilizing Indalone's dual properties as a light screening agent and insect repellent.

Wider Usage of Ethanol

There are many reasons why the perfume and cosmetic industry has, since the earliest days, been a heavy user of ethanol. Perhaps first is its wide-range solvent power. However, its astringent action on the skin, its antiseptic power, and its rapid evaporation rate which leaves a pleasant, cool sensation are factors of equal importance.

Still another prominent advantage of ethanol is its pleasant, neutral odor, which entails no camouflaging.

Medicated lotions, shaving lotions, hair lotions and the rest of the strongly alcoholic products may safely be expected to be on the market in ever increasing variety just as soon as conditions permit. The same applies to the mildly alcoholic lotions—skin fresheners, cleaners, deodorants, hair wavers, bleaches and the rest—and to ethanol-containing shampoos, liquid shaving soaps, dentrifices. Yes, even bubble-bath preparations!

Other U.S.I. Products

Among the other U.S.I. products destined to find widening use in postwar cosmetics are urethan (as a patented fixative for hair dyes), amyl acetate (for perfuming and flavoring lipstick), ethyl acetate, amyl acetate and ethyl phthalate (as perfume ingredients), nitrocellulose solutions (for nail enamels), ethyl, butyl, and amyl acetates and dibutyl phthalate as plasticizers in lacquer and as nail polish removers.

Alkyd Resin Used in Wound Coverings

Rayon, impregnated with an alkyd resin, has been accepted by the British Pharmaceutical Codex as a substitute for oiled silk to be used in covering wet dressings to inhibit drying.

TECHNICAL DEVELOPMENTS

Further information on these items may be obtained by writing to U.S.I.

Four new adhesives are offered by their manufacturers for the following applications: **(No. 847)** for back and face of container labels; adhesive is claimed to dry immediately to clear film that resists water, weather, oil, brine: **(No. 848)** for sealing waterproof boxboard containers; adhesive comes as a dry, stable powder: **(No. 849)** for laminating structural wood parts; this resin adhesive is claimed to cure in one hour at 180° F and to have a working life of four hours at 70° F: **(No. 850)** for bonding aluminum to aluminum, iron to iron, or either metal to non-metals; consisting of resin base and curing agent, adhesive acts at 300° F.

U S I

A new synthetic insecticide is offered for replacing scarce natural products in the control of aphids, leafhoppers, and other pests. In killing certain sucking insects, the product is claimed to equal nicotine, rotenone, and pyrethrum. **(No. 851)**

U S I

Continuous dehydration of compressed air or gas is said to be feasible with a new device comprising two ceramic tubes, one water-repellent, the other water-permeable but impervious to air. Designed to protect air tools, gas generators, etc., the device is inserted in the line. The second tube acts as a wick continuously drawing out water without allowing gas to escape. **(No. 852)**

U S I

A new neutralizer perfume is claimed not only to have the hiding power to cover the heavy odors of toxic agents, but in addition to impart a light refreshing fragrance. **(No. 853)**

U S I

A new hot-forming plastic comes in laminated sheets which can be bent, formed or drawn, upon heating to 275° F, according to a recent announcement. Products so formed are said to have high tensile, flexural, and compressive strengths. **(No. 854)**

U S I

Mildew proofing, of cotton, jute, sisal, linen and hemp, is said to be effected with a new product. The product comes as a solution which is compatible with standard water repellents. **(No. 855)**

U S I

Higher adhesion of paints, lacquers, and enamel to surfaces of copper, brass, or bronze is said to be obtained when the surface is first treated with a new product which produces a stable, adherent cupric oxide coating. **(No. 856)**

U S I

A new stearate, claimed to prevent water absorbtion by edible hydroscopic powders, is also offered for use in edible oil emulsions, shortenings, etc. Other uses include emulsification of waxes, oils, and polishes, and as a pour-point depressant for lubricating oils. Dispersible in hot water, product is soluble in alcohols and hot hydrocarbons. **(No. 857)**

U S I

A molasses replacement for use as a binder in foundry work, briquetting, thickening agents and similar applications, is reported to be available in quantity, without allocation limitations. **(No. 858)**

U.S.I INDUSTRIAL CHEMICALS, INC.

60 EAST 42ND ST., NEW YORK 17, N. Y. — BRANCHES IN ALL PRINCIPAL CITIES

ALCOHOLS
Amyl Alcohol
Butanol (Normal Butyl Alcohol)
Fusel Oil—Refined

Ethanol (Ethyl Alcohol)
Specially Denatured—all regular and anhydrous formulas
Completely Denatured—all regular and anhydrous formulas
Pure—190 proof, C.P. 96%, Absolute
*Super Pyro Anti-freeze
*Solox Proprietary Solvent

***ANSOLS**
Ansol M
Ansol PR

*Registered Trade Mark

ACETIC ESTERS
Amyl Acetate
Butyl Acetate
Ethyl Acetate

OXALIC ESTERS
Dibutyl Oxalate
Diethyl Oxalate

PHTHALIC ESTERS
Diamyl Phthalate
Dibutyl Phthalate
Diethyl Phthalate

OTHER ESTERS
*Diatol
Diethyl Carbonate
Ethyl Chloroformate
Ethyl Formate

INTERMEDIATES
Acetoacetanilide
Acetoacet-ortho-anisidide
Acetoacet-ortho-chloranilide
Acetoacet-ortho-toluidide
Acetoacet-para-chloranilide
Ethyl Acetoacetate
Ethyl Benzoylacetate
Ethyl Sodium Oxalacetate

ETHERS
Ethyl Ether
Ethyl Ether Absolute—A.C.S.

FEED CONCENTRATES
*Curbay B-G
*Curbay Special Liquid
*Vacatone 40

ACETONE
Chemically Pure

RESINS
S&W Ester Gums—all types
S&W Congo Gums—raw, fused & esterified
S&W *Aroplaz—alkyds and allied materials
S&W *Arofene—pure phenolics
S&W *Arochem—modified types
S&W Natural Resins—all standard grades

OTHER PRODUCTS
Collodions
Ethylene Glycol
Nitrocellulose Solutions
Ethylene
*Indalone
Urethan

2

Oxzyn

SERVES THE TRADE EXCLUSIVELY

WITH QUALITY

LIPSTICKS

COMPACTS (ROUGE, POWDER, MAKEUP)

CREAM ROUGES

EYE SHADOWS

EYEBROW PENCILS

WATERPROOF MASCARAS

CREAMS

FACE POWDERS

WE ALSO MANUFACTURE POWDER PUFFS, VANITY PUFFS, LOOSE SIFTER POWDER DEVICES AND SPECIAL LAMSDOWNE PUFFS

PRODUCTS MADE IN CONFORMITY WITH THE PURE FOOD, DRUG AND COSMETIC ACT
PRODUCTS LIABILITY INSURANCE CARRIED

OXZYN COMPANY

NEW JERSEY OFFICE
ONE PLEASANT AVENUE
CLIFTON

MANUFACTURING
Cosmetics of Quality
SINCE 1877
AUXILIARY PLANT • LOWELL, MASS.

CANADIAN OFFICE
54 OSLER AVENUE
WEST TORONTO, ONTARIO

In wartime medical science fights . . . to mend bodies and minds broken by war . . . to control the diseases that are more prevalent in war.

The availability of human blood plasma, for instant use in emergency transfusions, has already saved thousands of lives in the present conflict . . . will save thousands more.

Credit high vacuum . . . within the micron range . . . for making possible the drying and preserving of blood plasma. Stokes was privileged to assist in the development of this method for drying human blood plasma from the frozen state . . . to engineer and build special vacuum equipment and high vacuum pumps which make possible the large-scale production of plasma and other liable biological and pharmaceutical products which are now required.

Stokes engineers and builds equipment for applying high vacuum methods to many processes . . . also tablet machines and other types of pharmaceutical equipment; tube filling, closing and sealing machines; water stills for laboratory and industrial purposes; and other specialized equipment. Consultation is invited.

F. J. STOKES MACHINE CO.
5932 Tabor Road, Olney P. O., Philadelphia 20, Pa.

F.J.Stokes *High Vacuum* PROCESSING EQUIPMENT

FJS Est 1895

Production Forum

By Francis Chilson

Industrial Consultant

Electronic Sterilization

Electronic heating of foods and drugs is the most effective, efficient and economical method yet discovered for the treatment and prevention of insect contamination. High frequency alternating electrostatic fields are the only mechanism in the world of physics that can create heat internally throughout a mass with such uniformness that every particle of the mass experiences the same temperature rise in the same interval of time. This attribute of electronic heating overcomes all the difficulties arising from surface heating means such as hot air, infra red lamps or hot plates for heat treatment of organic materials, which, as is well known, are poor heat conductors. The Industrial Electronics Division of the Federal Telephone and Radio Corporation of Newark, New Jersey, manufacturing associate of International Telephone and Telegraph Corporation, makes this new type of heating available to the food and drug industry today with a portable, easily operated, and readily installed Megatherm electronic heating unit.

Sterilization of pharmaceutical and food products has developed into perhaps the most important food job for electronic heating at the present time. Whether it will continue to hold this position remains to be seen, but there is now an imposing list of applications. Edwin D. Tillson, testing engineer and investigator for the Utilities Research Commission reports that it is possible to "take any given quantity of grain or processed material, no matter how badly infested, and completely sterilize that grain, cereal, flour, feed, seed, soybeans, starch, meal, malt, or whatever it happens to be, in one treatment, so that it can be stored with good material or shipped out with assurance that it is completely sterile. In other words, this is a method which kills all four life stages of the insects, and without injury to the material, whatever it is."

According to the equipment manufacturer, complete sterilization is assured with no possibility of damage either to the food values or fertility of the grains treated because the temperatures at which insect life can be destroyed are well below the safe maximum temperatures of grain products. Department of Agriculture entomologists have determined that "a temperature of 130 to 140 degrees F. is necessary to destroy insect life" whereas "the maximum safe drying temperature of wheat, for example, is 180 degrees F." The spread between these two boundary temperatures provides a margin of safety large enough to contain all operational eventualities, and is far more than ample when electronic heat is used, since absolute temperature control at all times is possible.

Contaminated grain, or apparently healthy grain that is being prepared for storage, needs merely to be passed between the plates of an electronic heating unit on conveyor belts at an appropriate speed and in 20 or 30 seconds the grain is heated to sterilizing temperature. While the grain is passing through the electronic field, high frequency energy at millions of cycles per second passes through the individual kernels, generating heat directly within each particle of every kernel at the same rate and at the same time. Heating takes place simultaneously in the kernels at the outside and in the center of the mass. All heating stops the instant the grain passes out of the electronic field.

Packaged finished products such as flour, baking mixes, prepared cereals, powdered corn, baby foods, dog food and many others can be sterilized completely on the way to the warehouse or at any time before shipment with the same ease and speed as bulk materials. Conveyor belts carry the packaged goods into the electric field of the heating unit where the energy passes readily through the containers and heats the contents in the manner mentioned above. For example, a carton containing 24 boxes of pancake flour, completely sealed and ready for shipment, was heated to the sterilization temperature of 130 degrees F. Heat treat time from 10 to 30 seconds was adequate for complete sterilization. Other products tested include dry Bisquick Mix, a gingerbread mix in its dry form, Gold Medal Flour, coffee, tea, and others with temperatures ranging from 130 to 140 degrees F. and heating time from 10 to 40 seconds. Although careful preliminary studies established the fact that none of the above products were infested prior to treatment, the uniformity with which the temperature was produced within the product gave complete assurance in each case that had it been infested even to an imperceptible degree, such infestation would have been destroyed.

A 3-kilowatt Megatherm unit, developing 10,000 B.T.U.'s per hour, can sterilize approximately 480 one-pound packages an hour. The economy obtained by this method of de-infestation is remarkable, as at an operating cost of 5 cents an hour, based upon a 1 cent per kilowatt hour rate, sterilization is obtained for 1/100 of a cent per package. As the power and rectifier tubes have an average life of 5,000 and 10,000 hours respectively, and are practically the only parts which are subject to replacement, maintenance costs are lower than those for other types of industrial equipment. Totalling the amortization costs of the original unit, cost of replacement parts as well as power costs over a 10 year operating period, would amount to an average of 17 cents per hour of operation.

As this equipment is completely automatic in operation, with only simple push-button controls, it may be operated by unskilled, non-technical personnel. Occupying a floor space of but 30 by 30 inches and weighing 900 pounds, the 3-kilowatt, air-cooled unit is readily adaptable to quick change of location near any convenient outlet.

In addition to the sterilization of food products, such as those mentioned, there is another tremendous field for sterilization in the drug and pharmaceutical industries. Items such as bandages, sulfa powders, suture, etc. receive beneficial sterilization after packaging and prior to shipment.

It will be realized that in many instances, due to the particular shape of the package, or due to the form in which the food is to be treated, the design of the handling machinery will call for the aid of industrial engineers in the food processing plants. They, together with the technologists in this specialized field, are best able to decide what is acceptable, both from the standpoint of handling and from the standpoint of heat treat results.

Palmer Promises

Under this caption in July I referred to a communication received from Frank D. Palmer, Inc., announcing numerous new types of packaging equipment which this firm would make available after the war. This list was so extensive that I was frankly skeptical and said so. I had known Frank Palmer as a brilliant packaging machine designer whose previous work had mainly been of a special character and I regarded the release from his office as a little tom-tom beating. Frank, however, promptly calls the turn on me by pointing out that most of the machines referred to are not dreams on drawing boards, but that on the contrary some of them have been operating for several years as special developments. I'll let you read his letter yourself:—

"My attention has been called to your article in the July issue of Drug and Cosmetic Industry.

"It so happens that without knowing of this article, our Vice-President, Mr. R. W. Johns, called upon you in New York during your absence from the city.

"Perhaps an explanation of our method of operation is in line. The past six years our business has been the development, building, and installation of special machinery, largely in the packaging field. In the course of this development, the items mentioned in our circular have come into use. Not one of the items mentioned in this circular is a dream of the future, but on the other hand all are developments of the past for the exclusive use of concerns for whom they were developed. On all of the items mentioned the time limit of exclusiveness will have elapsed, and the equipment and packages will then be available for general use.

"Additional developments will be announced from time to time, including a new type of case sealer designed for the elimination of lengthy conveyor systems, vacuum fillers, equipment for making and assembling vacuum caps, machinery for the baking industry not heretofore mentioned, and other equipment for manufacturing and packaging candy bars and similar products.

"Our siftproof and moistureproof packages are heat sealed. The blanks are furnished by the Menasha Products Company, coated with their heat-sealing material, and have been in use for jelly powders, cake flour, and pancake flour for over four years. Our machines for forming and filling lined cartons are in use in the cheese and frosted foods industries by Kraft, Birds Eye, Borden, Wheeler, Swift, Armour, and a number of others.

"Our machines for forming slip-cover boxes are of the same type as the above, with the cover made over the bottom, at speeds up to 100 per minute.

"Our heat-sealed liners in locked cartons are made on the same machine, using a locked carton instead of a glued one.

"Our volumetric fillers are in use by Kraft Cheese Company and others, handling grated cheese and other free-flowing products at 120 per minute speed.

"Our bag-making equipment is in use in a number of plants at speeds up to 100 per minute.

WHAT'S YOUR C.O.B.?

C.O.B. means Cost On Bottle
. . the true cost of closures

You can't tell what closures cost by looking at a price quotation. Some cost more to apply than others. Some entail more losses on rejects and returns. So the *actual* price you pay for sealing is Cost On Bottle properly sealed.

When you add up everything, you are likely to find, as many others have, that Alseco Seals are your best buy. Speedier application with minimum labor cuts production costs. Tighter, more uniform sealing virtually eliminates leakers and breathers, cuts down rejects and returns.

Alseco Seals made of aluminum may now be used on products that have not been able to use them since aluminum became a critical war material. Your product may be one of these. We can tell you.

How to figure C.O.B.

	Present Seals	Alseco R-O's
Price of seals per 1,000		
Cost of applying 1,000 seals (Man and machine hours)		
Losses (rejects and returns caused by unsatisfactory sealing)		
Cost On Bottle per 1,000		

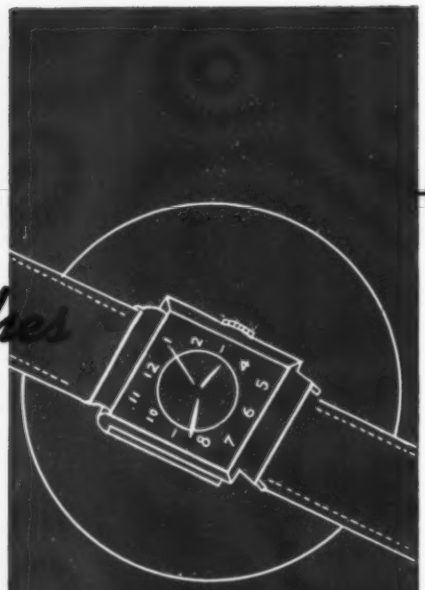
ALSECO

SEALS AND SEALING MACHINES

ALUMINUM SEAL COMPANY • 1323 THIRD AVENUE • NEW KENSINGTON • PENNSYLVANIA

At your service, 30 years of experience building quality seals and sealing machines

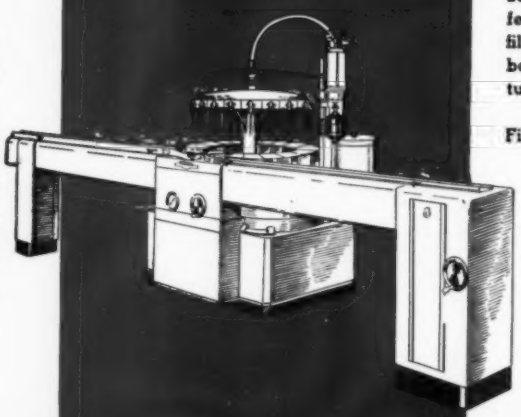
CINCINNATI CRAFTSMEN
MAKE
WORLD-FAMOUS
Watches



It requires a skilled hand to form the delicate beating heart of a fine timepiece. Cincinnati craftsmen possess this talent in abundant measure.

CINCINNATI CRAFTSMEN
MAKE
WORLD-FAMOUS
Kiefer Filling Machines

For generations the handiwork of Cincinnati craftsmen has fully manifested itself in many avenues including the building of precision machinery. True artisans have for years given of their skill in the construction of Kiefer bottling and packaging equipment.



Completely automatic, semi-automatic, hand-fed equipment to clean, fill, close, convey jars, bottles, tins, collapsible tubes.

●

Filters Pumps Percolators

THE KARL KIEFER MACHINE CO.
New York
Boston
Chicago
CINCINNATI, U. S. A.
San Francisco
Seattle
Los Angeles
London, England

"Bottle-filling equipment we have built for Abbott Laboratories, as well as a very large number of other specially developed machines for the pharmaceutical field, including the filling and heat sealing of glass ampoules, special shaker envelope machine, conveyors and handling equipment, as well as specially designed check weighers. All of these machines are in constant use, limited to special users.

"If you are interested in any one of these developments, it will not be necessary for you to 'wait and see,' since we can arrange to have any of this equipment shown to you by special appointment.

"We extend to you an invitation to visit our plant and laboratory in the hope that at some future date our development organization may have some service which would prove interesting."

Industrial Hazards

In a recent discussion of safety devices intended for the protection of women workers especially, I indicated that under certain conditions safety devices could become industrial hazards. This belief was accentuated recently by an incident that occurred at the Norwich Pharmacal Co. during the taking of X-ray pictures. Like many other forward looking companies Norwich is X-raying its employees at company expense as a means of detecting incipient tuberculosis so that preventive measures can be taken. When it came Howard Sumner's turn to step up before the X-ray screen he couldn't quite make it. For those of you who do not know the inimitable Mr. Sumner, well I must explain to you that Pa has a little pot belly which sometimes, as in this instance, gets in his way. Because of the fact that his chest has fallen about a foot (coupled with certain pronounced ecclesiastical tendencies) Sumner is known locally as the "Bishop." Well on X-ray day the Bishop with his customary alacrity stepped up to the screen to show the folks proper technique in having themselves X-rayed, but because of the aforesaid protuberance he couldn't get anywhere near it. The nurse reminded him gently that since it was his chest that was being X-rayed he'd have to pull in his paunch and press his chest against the screen. With a mighty effort the Bishop took a deep breath, sucked in his gut and——his pants fell off! Wasn't that a pretty spectacle? And he was wearing his "come hither" panties too—the ones with the green stripes. As I've said before you can't always predict the end-result of certain protective industrial practices.

Mene Mene Tekel Upharsin!

Remember how for years I have been harping about plant cleanliness? Although I have long regarded absolute cleanliness as the first condition of efficiency and therefore in itself an economical practice quite apart from its moral implications, the fact is that now cleanliness is a *legal* requirement of drug manufacture as it well should be. I have on innumerable occasion said that the day would come when the F. D. A. would start policing drug plants as dairy and meat packing plants have been policed. And now it is here. A well known drug plant has been closed down. A branch plant of another has been compelled to cease operations until it can be cleaned up. Other plants have been inspected and all of you will sooner or later get the once over by sharp official eye. It is inevitable that plant suspensions would come. They should come to many prominent drug plants because in blunt words they are filthy. It is not going too far afield to say that there are more dirty plants in this trade than clean ones. Some of us do not even know the first rudiments of plant sanitation. But we are going to learn damn fast—the hard way. One would assume that manufacturers of products intended to prevent illness and remedy disease would as a matter of common morality conduct all manufacturing operations under conditions of scrupulous cleanliness. But we don't. So now, at long last, if we can't learn to see dirt the government is going to take us by the nape of the neck and rub our nose in it.

All questions of legality and morality aside, clean operation pays big dividends. It is economical to be clean and to stay clean. Again I say I have never been in a plant that was really efficient and dirty also. It is humanly impossible for workers to put forth their best efforts in an environment of dirt and disorder. The trouble with too many manufacturers is that they have no appreciation of the great value of intangibles of which cleanliness is one. They will hold down expenditures for porter service, cleaning materials and equipment; they will scoff at really efficient dust collecting equipment; they will grouse about the cost of daily clean up periods—simply because these costs are tangible and can be seen. But the cost of lost production, inefficient production, lost time, and bad morale is lost on such manufacturers because the losses so caused are not lump sums that can be set forth in the profit and loss statement; such losses are buried, "lost" in the figures. Do you know that in the dairy industry 43% of its entire plant payroll is devoted to sanitary procedures? Our's by comparison is infinitesimal. Yet the dairy industry thrives and prospers and pays dividends—as a matter of fact it didn't begin thriving as an industry until public health authorities took it over and made cleanliness legally mandatory.

So for your own sake beware lest the handwriting on the wall be spelling your name. The government isn't fooling and it isn't going to issue warnings so that you can clean up before the inspector gets around, neither is it going to accept alibis. There's no alibi for dirt.

Hose Reel

Long snakey lines of hose stretched along the floor and hanging in festoons from overhead beams are by no means ornamental. It has always been possible to obtain reels operated with spring motors which would wind up small diameter hose. But big reels that would handle 1-5/8" hose have not been so common. The Appleton Electric Co., 1716 Wellington Ave., Chicago, 13, Illinois, are now offering a hose reel that will handle at least 50 feet of hose of the indicated outside diameter.

War Work that will lead to better peacetime packaging

When peace comes we will be better qualified than ever to meet new packaging requirements and the urgent need for *lower costs.*

We have been building new wrapping machines right along for essential civilian products and supplies used by the Armed Forces. Equally important, many of the armament machines we build, particularly the Navy Gyrocompasses, embody advanced mechanical principles applicable to packaging machinery. And all of the equipment calls for the highest type of designing skill and the finest precision workmanship.

Why not discuss your present and postwar packaging plans with us now?

Write for our new book "Sales Winning Packages and the machines that produce them"

PACKAGE MACHINERY COMPANY
Springfield 7, Massachusetts
30 Church St., New York 7 • 111 W. Washington St., Chicago 2
101 W. Prospect Ave., Cleveland 15 • 443 S. San Pedro St., Los Angeles 13
32 Front St., W., Toronto 1

PACKAGE MACHINERY COMPANY

Over a Quarter Billion Packages per day are wrapped on our Machines

Fluid Strainer

Wherever fast, thorough straining of fluids carrying materials in suspension is required, the "Rotospray" sifter provides the modern means to do an efficient job. Designed specifically for this purpose, it features a small size *vertical screen* that assures highly efficient screening and low maintenance. Saving in the cost of screens in many cases pays for the machine itself. This portable strainer is proving in everyday service that it can help turn out better products faster and more economically.

Simplicity is its keynote. Fluid is fed into the funnel, where it is directed to contact with a rapidly revolving disc. Centrifugal action immediately converts the fluid into a fine spray and propels it through the vertical screen. Coarse material, interrupted by the screen, flows downward to a residue tank at the bottom from where it can be disposed of easily. Depending upon the mesh screen employed, the machine can strain up to 2500 gallons per hour.

The "Rotospray" is sold through B. F. Drakenfeld & Co., Inc., 45-47 Park Place, New York 7, N. Y. Write for new folder which explains the principle of operation, shows a cross-section of the Rotospray and gives capacity, dimensions and weights.

Air Scrubber

Unlike many types of air washers heretofore available, the new Ross Scrubber contains no spray nozzles and requires no extensive piping to install, features that eliminate the usual sources of trouble and expense, it is claimed. These Ross Scrubbers not only thoroughly clean air but are designed for use in humidifying, dehumidifying, cooling and fume elimination. The bulletin explains how they can also be utilized to heat white water or fresh water without the need for steam and a schematic layout for such water heating is included.

Copies of bulletin, No. 205, may be had by writing to the J. O. Ross Engineering Corporation at 350 Madison Ave., New York 17, N. Y.

Nearsighted Inspectors

One smart drug outfit has employed nearsighted girls for ampoule inspection work because they can work intently for hours without eyestrain. That is good common sense. After watching ampoule inspectors at work I often marvel that they have any eyes at all.

When the Boys Come Back

Have you made any provision for the assimilation of returned servicemen into your organization? Do you realize that more is involved than merely setting up a program of releasing new workers to make way for the old? The men who come back will be the men who went away. They'll be older, more mature, bitter and cynical perhaps, and some will be hurt spiritually as well as physically. The men who really saw action may have deteriorated spiritually even though outwardly no sign is manifest. What you may be up against was sharply brought to mind the other day by a young marine just finished with his training in "boot camp." He had mentioned to me that physically able marines brought back from the fighting in the South Pacific were running the PX stores in the camp. The youngster said to me, "You never saw such a bunch of jerks. You give them a quarter for a pack of cigarettes and they'll hand you a chocolate bar and maybe change for a dollar. Then when you give them hell for making a mistake they look at you in a puzzled dopey sort of way."

Shell shock—nervous fatigue, they call it now. The callous and callow young marine couldn't be expected to understand the affliction of the veterans in the PX stores—he may before he's through. But you are going to have to learn about it. The men who come back will need your deepest sympathy and broadest understanding. Even when they are not wounded or obviously shell shocked, they will do things that may make them unfit for their old jobs. They will make mistakes. They will in some cases be irresponsible. They will be restless. They may have a grudge against manufacturers who failed to meet delivery dates; against labor unions for strikes and high wages; against the government for the war itself; against their families and their friends. Surveys already show the restlessness of the returning men because an overwhelming percentage of them do not want their old jobs back; they do not even want to go back to their old home town.

Many of the veterans will have earned promotion in the field, will have commanded men and will not want to resume subordinate jobs. Some of the boys will feel that because they served in the military forces they are perforce entitled to special privileges which it may not be practicable to grant. After all you have your organization to preserve.

I don't think we should allow sentimentality to run wild. I don't think we should slobber over returned veterans. Neither we nor they should forget that the great majority of the servicemen wouldn't have been in the service if they could have avoided it. And servicemen should not forget that many civilians have

HERE IS A MIXER FOR FASTER MIXING WITHOUT AERATION

Cut shows a 1 HP Eppenbach Homo-Mixer processing entire contents of open-end 55 gallon drum at 7,000 RPM without vibration or splashing.

Mixing tank requires no cover because this mixer will not produce a vortex or other excessive turbulence on the surface.

Units designed up to 25 HP for mixing all types of free-flowing liquids.

The Eppenbach Homo-Mixer is unlike any known batch mixing device. The design permits far higher speeds than are practicable with any propeller or blade-type agitator. Proportional increase in hourly capacity may be easily attained, together with qualitative improvement of resulting mixture.

If you are not already familiar with this unique portable agitator, write for a copy of Catalog No. 402. No cost, no obligation.

EPPENBACH, INC.
44-12 11th Street, Long Island City 1, N. Y.

Eppenbach INC.
PROCESSING EQUIPMENT FOR OVER 30 YEARS

made infinitely greater contributions to the war effort than the majority of the soldiers, marines or sailors.

All the conditions stated above were encountered after the last war and it is my experience that the rehabilitation of returned servicemen was on the whole badly handled. Then few manufacturers had prepared programs to reorient the returned men. Few of them tried to imagine what the men would be like. This time many of us are preparing programs but I am afraid that not enough of us really have tried to forsee the psychological as well as the economic factors that will be involved in the inevitable reorientation program. It will take head and heart and hand to win the peace.

Double Pump

Leiman Bros. Inc., 132 Christie St., Newark, 5, New Jersey, have introduced a double pump consisting of two rotors mounted on a single shaft and a two section housing, so arranged, so that one side can be used as a vacuum pump and the other as a compressor. By suitable piping arrangement, both sides can be connected for two stage operation.

Pensioners and Pensions

It seems that my remarks on pensions have disturbed certain old timers who have pensions coming. Perhaps I should amplify my remarks. Without retracting a word about what I said concerning the manner in which prospective pensioners hold up progress by refusing to make decisions, I should emphasize that my remarks were concerned with pensions for executives. Giving some executives a pension is oftentimes a barefaced steal; giving others a pension is often an economy. People who have been unable to make more than three thousand dollars a year during their lifetime should be provided for by means of a pension system. But most pension systems are not worth a damn because they force a man to wait until he is sixty-five before he can draw full benefit from it. A man should be pensioned at fifty-five while he is still young enough to enjoy life and still has a good many years to live. Executives particularly, if they are to be pensioned at all, should be pensioned at fifty-five to make way for new blood. Perhaps the ideal executive pension system would be a partial pension system under which the executive would lose all executive powers and privileges at the age of fifty-five but would continue on on a part time basis as a consultant. This would rapidly promote the young and still retain the wisdom and experience of the old. There are special instances where I favor pensions for executives. I have known of men who brought a business from nothing to success by dint of their own efforts and abilities. I have known some men who actually revived a failing business and brought it back to health and strength again. I don't think such men should get a pension. A pension even at full pay is a paltry recompense for men of this type. They should at least get that plus a liberal monetary reward besides.

Film Spreader

Very often you are confronted with the problem of applying glue or adhesive to materials in sheet form. Charles E. Francis Company, Rushville, Indiana, have developed a machine which will handle various types of adhesives and other liquids and will apply them in a film of uniform thickness to sheet material.

Tape Marker

Top Flight Tool Co., P. O. 6726, Towson, 4, Maryland, is offering a handy little gadget which should be useful in printing tape for application to outer cartons or shipping cases where it is desired to record trade names, code numbers or the like. The machine weighs 50 pounds, is bench mounted and operated with a hand crank. The type used is rubber which may be quickly set up and a variety of colored inks may be employed. Rotation of the crank unwinds the shipping tape or adhesive tape from the supply roll to the rewinding roll. As the operation proceeds the tape is printed repetitively.

Liquid Wrapping

It is possible that one of the practices developed during the war for protecting metallic parts and other easily marred materials for shipment abroad, may be applied to packaging after the war. The Youngstown Miller Co. Sandusky, Ohio, developed a machine for melting and controlling the temperature of certain ethyl-cellulose material. The machine has been used for instance, for dipping spark plugs which is accomplished at a rate of 4500 plugs per hour. The dipping operation applies a thin film of the material which because of its nature solidifies quickly and in effect becomes a tight clinging wrapper until it is removed through the use of a sharp pointed instrument. It might be an idea to get dope on this machine and it is possible that the company might arrange to dip a few samples of odd shaped perfume bottles and the like.

Air Conditioning

I am beginning to wonder if the unit type of air conditioning system may not someday supplant the conventional type with its ramification of ducts, louvres, dampers and what have you. Ductwork, dampers, grilles, etc. usually accounts for about twenty per cent of the cost of an installation. And the ducts look like hell unless you can put them behind a hung ceiling. But the chief disadvantage of a centralized system is that as one compressor goes down the system is on the bum.

A unit system would use a multiplicity of small installations scattered about an area in such a way that duct work would be unnecessary. A decentralized system like this would be more flexible and in the event of a failure of an individual unit the whole system would not be out of order. The unit systems are available now but are not generally applicable where low humidity is the desideratum. Someday a smart boy will design a self contained air conditioning and dehumidifying unit. Then we'll have it.

10 GALLONS AN HOUR FROM LABORATORY UNIT

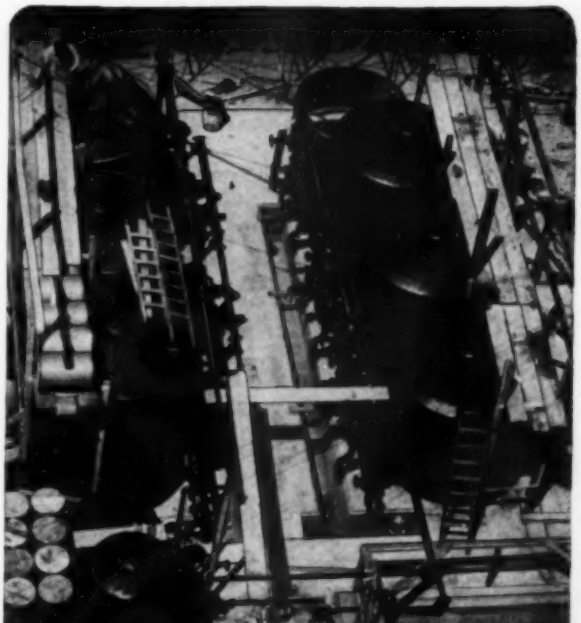
ILLCO-WAY DE-IONIZING UNITS

10,000 GALLONS OF DE-IONIZED WATER (replacing distilled water) FOR LESS THAN $1!

A *constant* and unfailing supply of pure water . . . *replacing distilled water at a fraction of the cost!* . . . is obtained from ILLCO-WAY De-ionizing units . . . in operation for over four years, meeting the most exacting standards in leading war industries:—synthetic rubber, aircraft engine, pharmaceutical, butadiene, distilleries, laboratories, etc. If you use pure water in any of your manufacturing processes or products . . . send for literature today!

ILLINOIS WATER TREATMENT CO.
Water Treatment Engineers
847-9 CEDAR STREET, ROCKFORD, ILL.

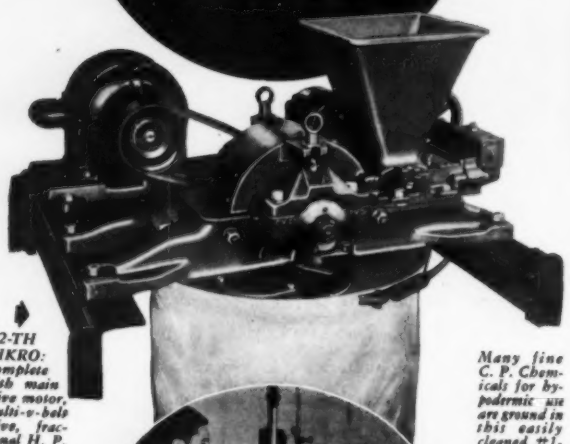
TESTED IN THE LABORATORY ILLCO-WAY PROVED IN THE FIELD



50,000 GALLONS AN HOUR FROM FACTORY UNIT

One Step

FROM FEED TO PROCESSED PRODUCT



#2-TH MIKRO: Complete with main drive motor, multi-v-belt drive, fractional H. P. feed drive motor. Swing eye-bolts on cover.

Many fine C. P. Chemicals for hypodermic use are ground in this easily cleaned #1-SH MIKRO. Housing piped with filtered air to insure maximum purity.

Do you require a uniform granular grind on roots, herbs, barks, or any material for percolation or solvent extraction? Or a dependable superfine grind for vitamins, dried animal glands, dextrose, sulfa drugs, and almost any of the pharmaceutical chemicals?

Does your product demand an exceptional blend or dispersion—*dry or wet*—for uniform distribution of a small amount of any given material into a large mass of a carrying base?

Regardless of material or specified grind, it's *one step* from feed to processed product with the dustless MIKRO-PULVERIZER!

THE MIKRO-PULVERIZER
blends and pulverizes in one operation!

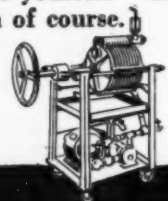
- Eliminates screening
- Keeps air dust-free
- Reduces cleaning time up to 90%
- Saves power from 25 to 75%
- Requires a minimum of attention of unskilled help — mesh controlled mechanically
- Needs little floor space — no steel or concrete foundations

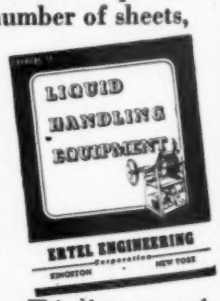
Free *Informative new 32-page catalogue showing the complete MIKRO-PULVERIZER line sent on request. Confidential FREE test grind on submitted samples.*

PULVERIZING MACHINERY COMPANY
22 CHATHAM ROAD • SUMMIT, NEW JERSEY

neutral asbestos Filter Sheets . . .

in 10 porosities from coarse pre-filtration to ultra-fine germproof filtration. Available in sizes to fit any type filter. No matter what your liquid handling problem, Ertel engineers can solve it quickly and economically. Ertel sheets are manufactured from the finest available materials under the most rigid specifications. The Ertel free testing laboratory will test and filter any liquid and return it with recommendations regarding the correct porosity filter sheet for superior filtering. And a sufficient number of sheets, recommended after test, will be sent for a single set-up in your filter so you, too, can prove the results. Ertel Neutral Asbestos Filter Sheets will filter your product better. Send a sample of your liquid today and see for yourself — no obligation of course.





Write for a copy of the new Ertel Catalog. Illustrates and describes Ertel Liquid Handling Equipment for Drug and Cosmetic industries.

ERTEL
ENGINEERING CORP.
KINGSTON, NEW YORK

NEW YORK OFFICE & SHOWROOM
Department E
40 WEST 48th ST.
NEW YORK, 19, N.Y.

Now *G-E COOLING* keeps 'em rolling!

IN making rubber-coated wire, the rubber—after preliminary processing—is put through finishing rolls, which turn at different speeds . . . *working* the rubber rather than just pressing it.

Right here is where the hold-up took place. The rolls—even though water-cooled—became so warm that the rubber stuck to them. Every time this happened, the rubber had to be removed and the rolls allowed to cool.

To end this serious loss of time and output, G-E Refrigeration was called on. A thermostatically controlled cooling system now feeds water into the rolls at 45° to 50° F—keeps the water in the rolls constantly at the most efficient temperature—greatly reduces the time for working the rubber—prevents sticking and shut-downs.

Unusual war production applications by the score are being found for G-E Refrigeration and Air Conditioning Equipment. As a result, G-E engineers are building up a fund of practical knowledge that should be most helpful to you, no matter what your heat transfer problems may be . . . *now* or in the future.

General Electric Company, Air Conditioning and Commercial Refrigeration Divisions, Section 449, Bloomfield, New Jersey.

☆ BUY . . . and hold . . . WAR BONDS ☆

Industrial Refrigeration by

GENERAL ELECTRIC

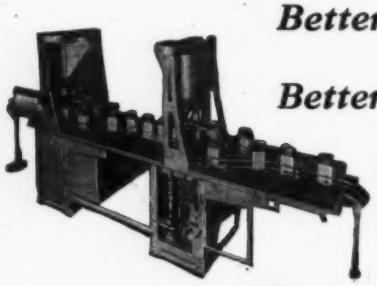
Hear the General Electric Radio Programs: The "G-E ALL-GIRL ORCHESTRA," Sundays, 10 p.m., E W T, NBC..."THE WORLD TODAY" News, Every Weekday, 6:45 p.m., E W T, CBS

LOOKING AHEAD
toward Post-war Days

Today, our facilities, like those of so many others, are filled to capacity turning out material that is helping bring victory and peace closer. For that reason we cannot always give the service which has built the "S & S" reputation over the past 40 years.

We are doing our best, though, to help our many friends and customers all we can. But, if you have to wait for repair parts or even new machines, we hope you will understand.

In the meanwhile, our engineers and designers are working steadily so the S & S machines you will want after the war will serve you better.



Better Machines for Better Packages

S. & S. 4 station Automatic Filling Machine.

STOKES & SMITH Co

PACKAGING MACHINERY — PAPER BOX MACHINERY

FILLING
PACKAGING
WRAPPING
MACHINES

4912 SUMMERDALE AVE., PHILADELPHIA 24, PA.

HORM ASBESTOS FILTER PADS

Order No. "Y"

To F.R.HORMANN & CO., INC.
Brooklyn, N.Y.

Sterilizing Filter Pads

Quantity . . **61,800**

Rejections--0

F. R. HORMANN & CO., Inc.

127 Boerum Place, Brooklyn 2, N. Y.

BUY WITH CONFIDENCE GET WITH No DELAY

2—Day Auger type Powder Fillers.
1—Pneumatic Scale 6 head, automatic Capper, mdl.
2—Karl Kiefer rotary 18-spout hand Fillers.
1—Semi-automatic Labeling Machine.
1—Pneumatic Scale Talcum Powder Filler and Cappers, Unit complete.
4—Monel open tanks, 25 gal.
5—Dry Powder Mixers, from 50 to 2000 lbs.
20—Aluminum, Copper, Glass Lined, acketed and agitated Kettles.
1—Abbe Blutergess Sifter No. 2
2—Colton No. 3 Toggle Presses
3—Stokes Steam Water Stills, 5, 10, 25 gal. per hour

We buy and sell from a Single Item to a Complete Plant

CONSOLIDATED PRODUCTS CO., INC.

20-21 Park Row, New York, N. Y. Shops 335 Doremus Ave., Newark, N. J.

SHEET METAL GOODS

SPRINKLER TOPS

CORK TOPS DOSE CAPS

CONSOLIDATED
FRUIT JAR COMPANY
NEW BRUNSWICK, N. J.

ROSS

MAKES THEM ALL

For Drugs and Chemicals

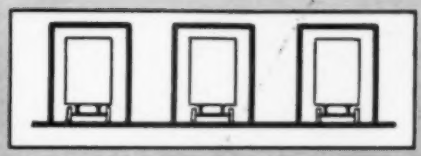
Whatever your drying problem might be—ROSS has an oven that will do the job as it should be done. Even on products and processes that present special drying problems—there's a ROSS DRYER to meet the requirements. With a ROSS DRYER you get the advantages of an exclusive design that provides scientific air distribution and heat regulation with zone control.

Why not discuss with our engineers your particular product and processing problem? The most complete Laboratory facilities are available for scientific testing purposes. Write to our office nearest you. No obligation.

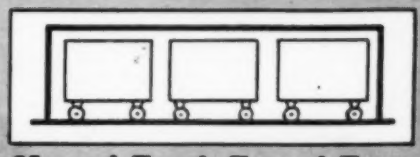
Some of the Prominent Users of Ross Dryers

The Bayer Company, Inc.
Colgate-Palmolive-Peet Co.
The National Drug Company
New York Quinine & Chemical Wks.
Schieffelin & Company
G. D. Searle & Company
Sharp & Dohme, Inc.
Stauffer Chemical Company
and others

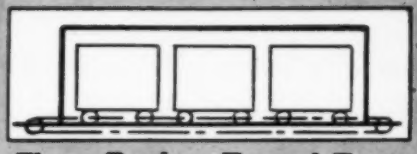
Industrial Drying Ovens



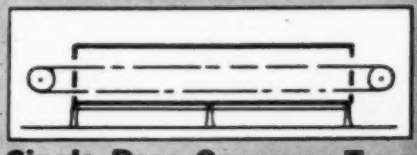
Batch Type



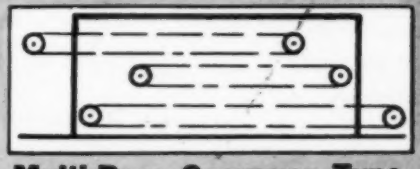
Manual Truck Tunnel Type



Floor Pusher Tunnel Type



Single Pass Conveyor Type



Multi-Pass Conveyor Type

J.O.ROSS ENGINEERING CORP.

350 MADISON AVE., New York 17, N. Y.

CHICAGO—6, 201 N. Wells St. DETROIT—3, 12953 Greeley Ave. BOSTON—9, 79 Milk St.

ROSS ENGINEERING OF CANADA, LTD., Dominion Square Building, Montreal

CONTROL OF AIR FOR MODERN INDUSTRY

Automatic filling and sealing

Away from Home

they use packets and increase consumption of your product

Automatic filling and sealing of paper packets is fast and economical. Packets offer many merchandising advantages. Send quantity of your material for test purposes . . . for return to you in packets . . . for report. No obligation. Write, wire or phone for full details.

THE BROWN BAG FILLING MACHINE COMPANY
FITCHBURG, MASS.

West coast representatives:
Peter D. Bowley & Associates
369 Fifth St., San Francisco, Cal.

for powders, granules, crystals

MAKE YOUR OWN GLASS PARTS WITH AN EISLER MACHINE

CHAS. EISLER
EISLER ENGINEERING CO.
775-90 13th ST. 1941 AVON AVE. NEWARK, 3 N. J.

Here's what you'll like about the new

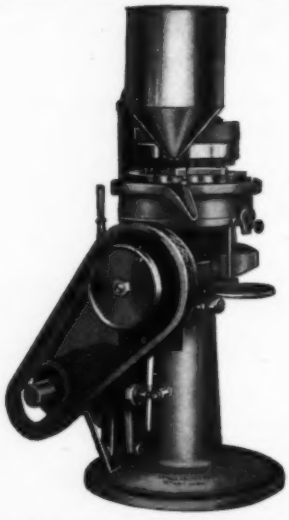
..."HAGERTY HANDY FILLER"

- Durable
- Moderately priced
- Eliminates spilling
- Simple to operate
- Convenient sizes
- Light construction

The most practical hand filler for creams, lotions and liquids.

Write for illustrated folder and prices

HAGERTY BROS. & CO.
10 Platt Street **New York, N. Y.**
Est. 1849



A NEW COLTON ROTARY TABLET PRESS
SERIES 200-25 ROTARY TABLET PRESS

The design of the Series 200-25 Tablet Machine is an outstanding engineering achievement, the culmination of years of experience in building tablet machines. This compact machine incorporates refinements that provide an entirely new standard of performance for this type of equipment.

ARTHUR COLTON COMPANY
2620 East Jefferson Established 1884 **Detroit, 7, Mich.**

● What *is* the can? And what's the new vegetable treat? First the can...

When a pin on this can is pulled, colored smoke billows out. Ground forces use these smoke-puffs to signal air support . . . to help pilots see where troops are located.

Which brings us to *your* eyes. If you have trouble seeing at night, it may be because of a deficiency of the night-vision vitamin A. Continental research has developed a process to provide this vitamin—in a delicious vegetable treat called "carrot chips."

These tasty carrot chips will come to you in cans some day soon. So will many other vegetable delicacies you can't get now. And, of course, your good old familiar vegetables will continue to come in cans. You'll enjoy all their healthful goodness and fresh garden flavor because cans *protect* and *preserve*.

To do our war job we've developed new ideas and new skills, too. That's why as we look ahead we see *new and better things in Continental cans.*

POST-WAR PLANNING: We'll be glad to discuss future uses or improvements of your product or package and help in your post-war planning. Write Post-War Planning Dept., 100 E. 42nd Street, N.Y.C., or Continental Can Company of Canada, Limited, Montreal.

CONTINENTAL CAN COMPANY

NEW AND BETTER THINGS IN CONTINENTAL CANS

Awarded to Plant 78, Chicago • Illinois

SAVE TIN CANS—HELP CAN THE AXIS

Do You Need a

Dry Packaging Department?

Open capacity now available on High Speed Automatic Machinery for packaging dry powders-drugs-cosmetics-chemicals.

Our complete custom packaging service includes mixing and preparation as well as packaging in cartons, cans, envelopes, paper tubes or set-up boxes.

Write or Phone

The Stevens-Wiley Manufacturing Co., Inc.

Hancock, Palethorp & W. Berks Streets

Philadelphia 22, Pa.

Phones—Regent 1616-1617

FOUNDED T & B 1856

"Look for the Symbol of Standardization"

GUMS

For over 75 years the recognized source of supply

Arabic

Tragacanth

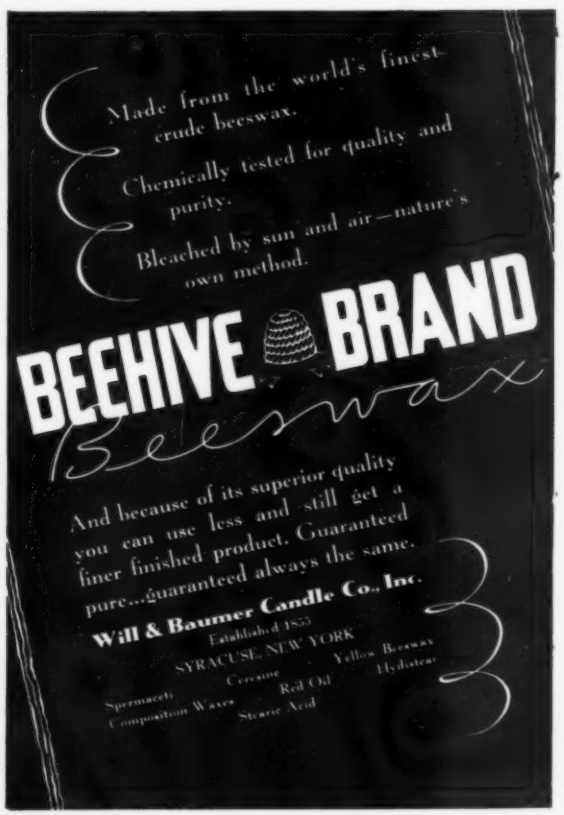
Karaya

All powdered gums standardized by Laboratory Control

THURSTON & BRAIDICH

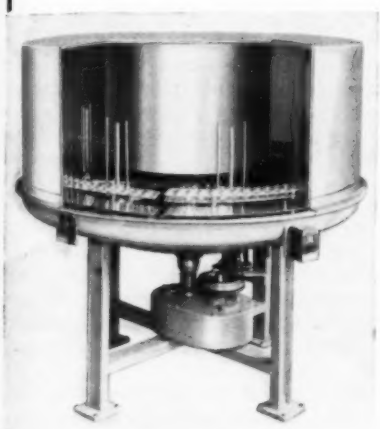
286 Spring Street **New York**

Represented in Chicago by A. C. Daury & Co., Inc.


Made from the world's finest crude beeswax.
Chemically tested for quality and purity.
Bleached by sun and air—nature's own method.
BEEHIVE BRAND
Beeswax
And because of its superior quality you can use less and still get a finer finished product. Guaranteed pure...guaranteed always the same.
Will & Baumer Candle Co., Inc.
Established 1855
SYRACUSE, NEW YORK
Spermaceti
Composition Waxes
Ceresine
Red Oil
Stearic Acid
Yellow Beeswax
Hydrotex

EXPERIENCE is the GREATEST TEACHER

In the planning and production of machinery for handling all types of glassware containers for bottling liquid and semi-liquid products, we have gained a vast experience over a long period of years. The Thorough cleansing and sterilizing of AMPULES, before certain products are filled into them, with economic, efficient and rapid delivery to the filling operation is essential. In the U. S. Rotary Ampule Washer will be found an answer to these needs.



Rotary Ampule Washer

The need for Ampule packed products has grown with the war, and the need for a thoroughly cleansed one increases.

The machine illustrated at the left is one of the types of this machine we are building to fit this need. These machines are all custom built to fit the specific requirements of the product, the degree and need for thorough cleansing and sterilizing, the size of container and production requirements. It can be adapted to handle 1, 2, 3, 5, 10, 20 and 50 and 100 cc's ampules or vials.

They are usually supplied with pure nickel, Stainless steel and Tin contact parts.

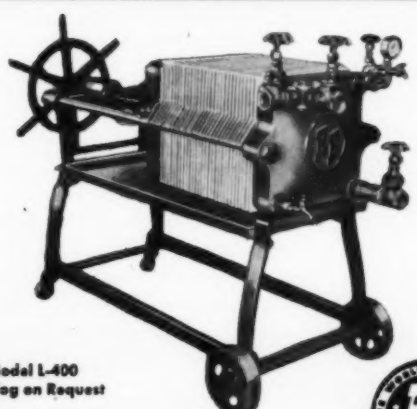
U. S. BOTTLERS
Machinery Co.
4011 N. ROCKWELL ST., CHICAGO

MANUFACTURERS OF
PUMPS
CAPPERS
FILTERS
CONVEYORS
WASHERS & DRYERS
WASHERS
CORKERS
FILLERS

REPUBLIC FILTERS

and media are especially designed for the drug and cosmetic industry to attain the desired degree of porosity, sterility and flow rates.

Our laboratory and technicians are at your service.



Model L-400
Catalog on Request

REPUBLIC FILTERS, Inc.
PATERSON, N. J.

Canadian Sales Office: 32 Front St., Toronto, Canada

GLASS TANKS

can take

SHARP TEMPERATURE CHANGES

GLASS TANKS by "Pittsburgh" are made of specially-tempered glass. It's 4 times as strong as ordinary glass. And it can withstand the shock of sharp temperature variations.

GLASS TANKS are imprevious to almost all acids, alkalis, chemicals, liquids. They are non-staining, sanitary. And they can be made of transparent glass to facilitate easy checking of contents.

Finally, you can get glass tanks *now*.

Send the coupon for complete facts on **GLASS TANKS BY "PITTSBURGH"**

Pittsburgh Plate Glass Company
2271-4 Grant Building, Pittsburgh 19, Pa.

Please send me, without obligation, free literature on Glass Tanks by "Pittsburgh."

Name.....

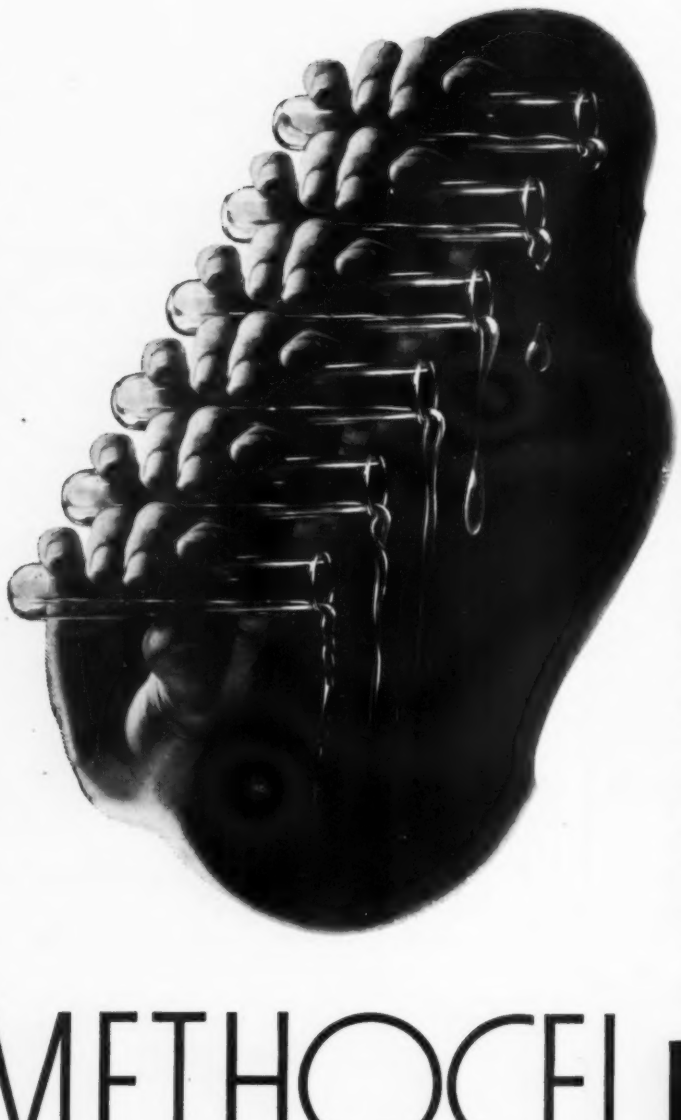
Address.....

City..... State.....

PITTSBURGH PLATE GLASS COMPANY

WIDE RANGE FLOWABILITY

A VARIETY OF VISCOSITY TYPES TO FIT EVERY JOB



In the preparation of a product, you have undoubtedly often wished for a water soluble colloid available in several different viscosities. Perhaps you wanted a solution much thicker—or considerably thinner—in order to obtain the specific results desired.

To meet your most exacting needs, we have designed Methocel in a wide variety of viscosity types. Selection of the most suitable type is dependent, of course, on results required and manufacturing limitations. Only when the right viscosity is used are maximum economy and efficiency achieved.

This wide-range flowability greatly expands the additional usefulness of Methocel in your operations—and, at the same time, promotes efficiency of application.

METHOCEL

THE ECONOMICAL, WATER SOLUBLE THICKENER

Methocel is a valuable addition to many cosmetic products requiring a thickener, protective colloid or stabilizer. For thickening purposes, a specially designed Methocel viscosity type is available. High viscosities are, naturally, generally recommended.

In protective hand creams and similar products, Methocel has several important functions. Emulsified forms of the product use Methocel as an emulsion stabilizer. In addition, Methocel serves as a protective film upon drying since it is resistant to both oils and organic solvents. By using low viscosity types here, desired amounts of solids are deposited.

Before adopting a specific Methocel type, we urge you to refer your problems to the Technical Service and Development Division.

THE DOW CHEMICAL COMPANY
MIDLAND, MICHIGAN

New York • Boston • Philadelphia • Washington • Cleveland • Detroit
Chicago • St. Louis • Houston • San Francisco • Los Angeles • Seattle

METHOCEL

Among the many Dow Products serving the Cosmetic Industry are: Synthetic Aromatics, Dowicides, Propylene Glycol and Paradow.

DOW

CHEMICALS INDISPENSABLE
TO INDUSTRY AND VICTORY

Industry's Books

Contagious Diseases, by W. W. Bauer, B.S., M.D., Director, Bureau of Health Education, American Medical Association, 188 pp., Alfred A. Knopf, New York, $2.50.

This standard book first appeared in 1934. Now rewritten and reset, its discussions, based on the increased knowledge acquired by the medical profession since that time, cover all the familiar contagious diseases to which children are susceptible. Dr. Bauer writes in a general way of germs, infection, immunity, and quarantine; then in detail he discusses diphtheria, scarlet fever, poliomyelitis (or infantile paralysis), whooping cough, measles, smallpox, chickenpox, rabies, itch, and the common cold. There are excellent chapters on home nursing, prevention, and convalescence. It contains a great deal of information on the prevention of disease and it should be an invaluable book in the home and a guide for all intelligent parents who would safeguard the health of the family.

Soybeans From Soup To Nuts, by Annie Williams-Heller, Nutrition and Food Consultant, and Josephine McCarthy, Home Economics Director, American Institute of Food Products, 119 pp., The Vanguard Press, New York, $1.25.

This is the first book of recipes showing how to prepare America's new miracle food—as meat stretcher, meat substitute, side dish, in appetizers, soups, salad dressings, sandwich spreads, breads and quick breads, cakes, cookies, pies, milk drinks, etc.

Physical Medicine In General Practice, by William Bierman, M.D., Attending Physical Therapist, Mount Sinai Hospital, 654 pp., Illus., Paul B. Hoeber, Inc., New York, $7.50.

The object of this book is to tell the practitioner in general and special fields of medicine how he might use physical measures with the others which he employs in his effort to be of greatest service to his patient. Contents: Heat and Cold; Hydrotherapy; Climatotherapy and Spa Therapy; Visible and Infra-red Radiation; Diathermy; The Short Wave Current; Fever Therapy; Surgical Diathermy; Galvanic Current; Ultraviolet Radiation; Massage; Exercise; Occupational Therapy; The Conduct of Treatments; Diseases of the Locomotor System; Neurological Diseases; Cardiovascular Diseases; Diseases of the Digestive System; Genito-urinary Diseases; Gynecological Diseases; Diseases of the Eye, Ear, Nose, and Throat; Respiratory Diseases; Dermatological Diseases.

Dictionary of Organic Compounds, Vol. I, Edited by I. M. Heilbron, D.Sc., Professor of Organic Chemistry at the Imperial College of Science and Technology, London, and H. M. Bunbury, M.Sc., Barrister-at-Law, Imperial Chemical Industries Ltd., 1072 pp., Oxford University Press, New York, $30.

Oxford is publishing the revised edition of Heilbron: Dictionary of Organic Compounds in this country. Volume I has been completely revised throughout, and the earlier Volumes II and III have been reprinted with supplements bound in at the back to bring them up to date. The individual volumes list at $30, the complete set at $75. Supplements for Volumes II and III are available separately for the convenience of previous purchasers of the set, and the price of these separate supplements is $1 each. All the compounds in this dictionary are arranged in strictly alphabetical order. The dictionary is therefore its own index. A generous number of cross-references, sometimes as many as three or four, are given, by means of which the principal references can readily be found. The full constitutional formulae is given for every compound with, of course, the exception of those whose constitutions have not yet been ascertained. The literature references relate primarily to the best method of preparation, but in some cases publications are cited which refer to earlier methods of preparation or which contain useful summaries or bibliographies. In the descriptive matter in the text the same order has been followed in all cases, viz: sources, where of interest; physical properties (melting point, boiling point, solubility, density; refractive index, heat of combustion, optical rotation, etc.); chemical properties (typical reactions, analytical tests, etc.) The data for derivatives then follow under separate sub-headings.

Fundamentals of Internal Medicine, by Wallace Mason Yater, A.B., M.D., M.S. in (med.), F.A.C.P., Professor of Medicine and Director of the Department of Medicine, Georgetown University School of Medicine, 2nd Ed., Illus., 1204 pp., D. Appleton-Century Co., Inc., New York, $10.

This volume is designed primarily to make readily available in simple form for student and practitioner the essentials of the vast subject of internal medicine. In this second edition subjects of interest to the internist in the Armed Forces have been added. These include, among others, medical problems incident to flying, immersion foot, blast injuries, effects of chemical warfare, industrial pursuits affecting the lungs, war neuroses and tropical medicine. Many other subjects have been added or revised, such as primary atypical pneumonia, blood typing, hypoproteinemia, steatorrhea, "liver function tests," the use of dicumarol, sarcoidosis, coccidioidomycosis, and preliminary evaluation of the use of penicillin. Three new sections have been written entitled "Symptomatic and Supportive Treatment," "Clinical Values and Useful Tables," and "The Physician Himself." A much more comprehensive index has been made and additional illustrations have been inserted. As in the first edition, sections on dietetics, diseases of the skin, diseases of the eyes, and diseases of the ears are retained, the object being to include in one volume all the clinical subjects that an internist may encounter in his daily work.

War-Born Developments

This global war has caused many shortages in essential oils and the resourcefulness of the aromatic chemical manufacturer and perfumer have made it possible to produce substitutes which have saved many a product from being withdrawn from the market. Quinine and rubber are excellent examples as to what happens when an enemy seizes the source of supply but thanks to the ingenuity of our chemists many substitutes are available. These developments have in many cases made us independent of these primary markets. The development of Synthetic Bergamot is an excellent example in this industry. The only source of Oil of Bergamot prior to the war was the Province of Calabria in Italy. When further shipments were not forthcoming the perfumers went to work and developed the artificial Bergamot and today we have many artificials which closely approximate the natural oil and work entirely satisfactory in many formulations.

Bois de Rose Brazil has been fractionated, acetylated and treated by various chemical processes to obtain certain derivatives which have aided the perfumer in approximating natural Bergamot and numerous experiments and blends have been made until the final results have been achieved.

Progress has been made in the development of many other substitutes with varying results but all credit is due to the perfumers and manufacturers for keeping the cosmetic manufacturer supplied.

It is believed that after hostilities are over that in many cases the users of the artificial products will not revert back to the natural oils and that these new items will find a permanent place in the industry.

Perfumer's Shelf

Natural Fragrances

After an apparently extensive study of natural fragrances, A. Muller (*Seifensieder-Ztg.* 69:264, 1942 through *Chem. Abstr.* 38:3779, 1944) reports that approximately 5 per cent of the 1,266 blossoms studied possessed fragrances having a heliotrope-like quality. Of these, about 14 per cent closely resembled heliotrope blossoms in odor. The heliotrope fragrance, he notes, is complex, e.g. heliotropin odor with a by-odor. However, pure heliotropin fragrance is quite rare, but it is purest in *Polerium villosum* Sibth. and Sm. Approximately 2.8 per cent of the blossoms studied had a more or less pronounced honey fragrance. However, no honey fragrance was found in 738 leaves studied. The fragrance complex of cedar wood (*Juniperus virginiana*) was found in 1.44 per cent of the blossoms investigated. Of the 738 leaves studied, only *Majorana hortensis* Mnch. possessed a cedar fragrance. Carrot fragrance was found in 2 per cent of the leaves, but in none of the blossoms.

Oakmoss in Scotland

During a vacation in Scotland, W. A. Poucher wrote to the editor of *S.P.C.* (17:403, 1944) that he had found dense growths of oakmoss (*Evernia prunastri*) in the Dee Side, Glen More and Rothiemurchus forests, where the moist atmosphere favors the growth of the lichens. In his letter, Poucher suggested that the density of the growths should encourage further investigation and exploitation of this source of oakmoss.

In presenting this communication, a brief review of the role of oakmoss, based upon Poucher's writings, was also included. Here it was pointed out that oakmoss is now one of the indispensable raw materials of the perfumer. The product obtained by volatile solvents is concrete, and consists largely of chlorophyll together with resin and volatile oil. The absolute is obtained from this concrete by the usual methods. The volatile oil is extracted from the concrete by treatment with acetone, which leaves behind the resin, wax and chlorophyll. It is also made by one firm by direct steam distillation of the lichen. Oakmoss is an excellent fixative for bouquets of the "poppy" type. It blends well with coumarin, amyl and isobutyl salicylate, ylang-ylang, methyl acetophenone and lavender, and is an excellent basis for chypre and fougere compounds. In small quantities, the best quality products are indispensable for perfuming face powders, in combination with jasmin, tuberose and orange blossom absolutes. In soap perfumery, oakmoss will strengthen, improve and cheapen lavender bouquets.

Odor of Tobacco Blossoms

In a report on the odor of tobacco blossoms, S. Sabetay, G. Igolen and L. Palfroy (*Rev. botan. appl. agr. trop.* 22:99, 1942) state that a concrete oil, melting at 53° C., was obtained in the petroleum-ether-extracted material (3.6 per cent) from the blossoms of *Nicotiana tabacum*. This produces 56 per cent of a pure oil with an index of refraction equal to 1.4821. By codistillation with ethylene glycol, perfume (10 per cent) was obtained, with the following characteristics:

Index of refraction at 20°C.	**1.4644**
Specific gravity at 15°C.	**0.9324**
Acid number	**149**
Ester number	**142**

In the chemical constituents identified were eugenol, free caprylic acid and combined acetic and formic acid. Reference is also made to the frequent occurrence of eugenol and isoeugenol and their possible biological significance.

Star Anise Seed Fatty Oil

In a study of the fatty oil from the seeds of star anise, J. W. Airan and S. V. Shah (*J. Indian Chem. Soc.* 19:175, 1942) found that a Soxhlet extraction of decorticated seeds with petroleum ether gave a fixed oil in a 55 per cent yield. Its chief physical and chemical constants were determined by the usual procedures and found to be as follows:

Saponification value	**194.5**
Index of refraction at 25°C.	**1.4677**
Iodine value	**88.36**
Acid number	**11.65**
Specific gravity at 25°C.	**0.9128**
Acetyl number	**8.37**
Reichert-Meissel value	**0.75**
Polenske number	**0.29**
Unsaponifiable matter	**0.59%**

The oil contains the following percentages of fatty acids: myristic 4.43, stearic 7.93, oleic 63.24, and linolic 24.4.

R.... STANDS FOR Rose

. . . and ROSE stands for one of perfume's most valued ingredients. Widely used in all types of floral bouquets, its rich, smooth odor is especially adapted to the scenting of creams and powders where softness, delicacy and tenacity of fragrance are the perfume's most desirable attributes. In the accompanying column is a partial selection of the many rose creations developed by our laboratories. We are genuinely proud of our rose specialties and recommend them to all perfumers whose judgment in the choice of materials is a reflection of their innate desire for quality.

ABSOLUTE ROSE F-240
A timely and valuable substitute for French rose absolutes.

OIL ROSE KAZANLIK SUBSTITUTE
A part-for-part replacement for genuine Rose Kazanlik.

ROSE OTTO
This Fritzbro Synthetic Flower Oil is full, fresh and inviting . . . likewise an excellent substitute for the true Kazanlik Rose.

ROSE CENTIFOLIA
A rose base distinguished by its soft character and honey-like sweetness.

TEA ROSE
This Fritzbro product imparts a deep, warm and velvety rose note.

ROSE No. 17
Imparts the smoothness and depth characteristic of the marechal niel species of rose.

ROSE No. 18
A soft, natural red rose type especially useful in talc and dusting powders.

ROSE No. 19
An extra high quality reproduction of red rose.

ROSE No. 20
A very fine reproduction of the red rose fragrance, recommended for use in alcoholic extracts.

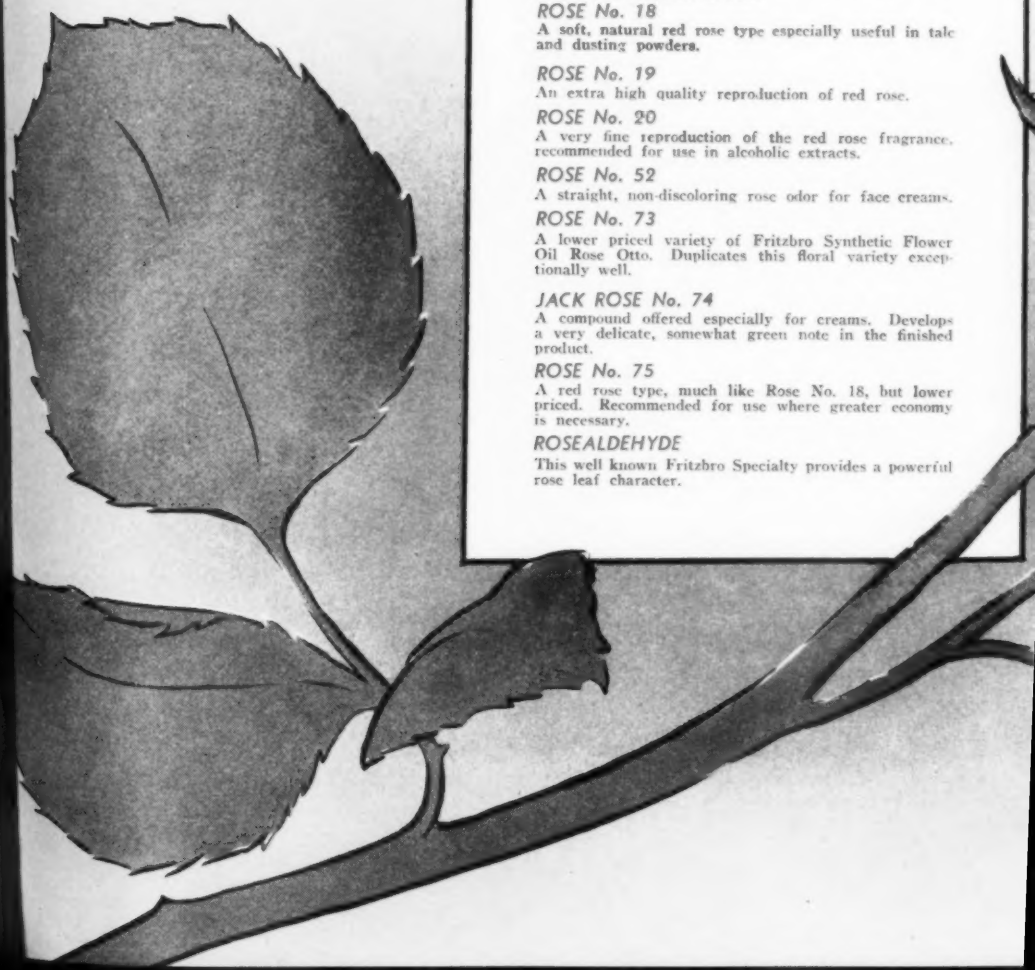
ROSE No. 52
A straight, non-discoloring rose odor for face creams.

ROSE No. 73
A lower priced variety of Fritzbro Synthetic Flower Oil Rose Otto. Duplicates this floral variety exceptionally well.

JACK ROSE No. 74
A compound offered especially for creams. Develops a very delicate, somewhat green note in the finished product.

ROSE No. 75
A red rose type, much like Rose No. 18, but lower priced. Recommended for use where greater economy is necessary.

ROSEALDEHYDE
This well known Fritzbro Specialty provides a powerful rose leaf character.



OR

e

French rose

e Kazanlik.

, fresh and
ute for the

aracter and

warm and

ristic of the

eful in talc

rose.

fragrance.

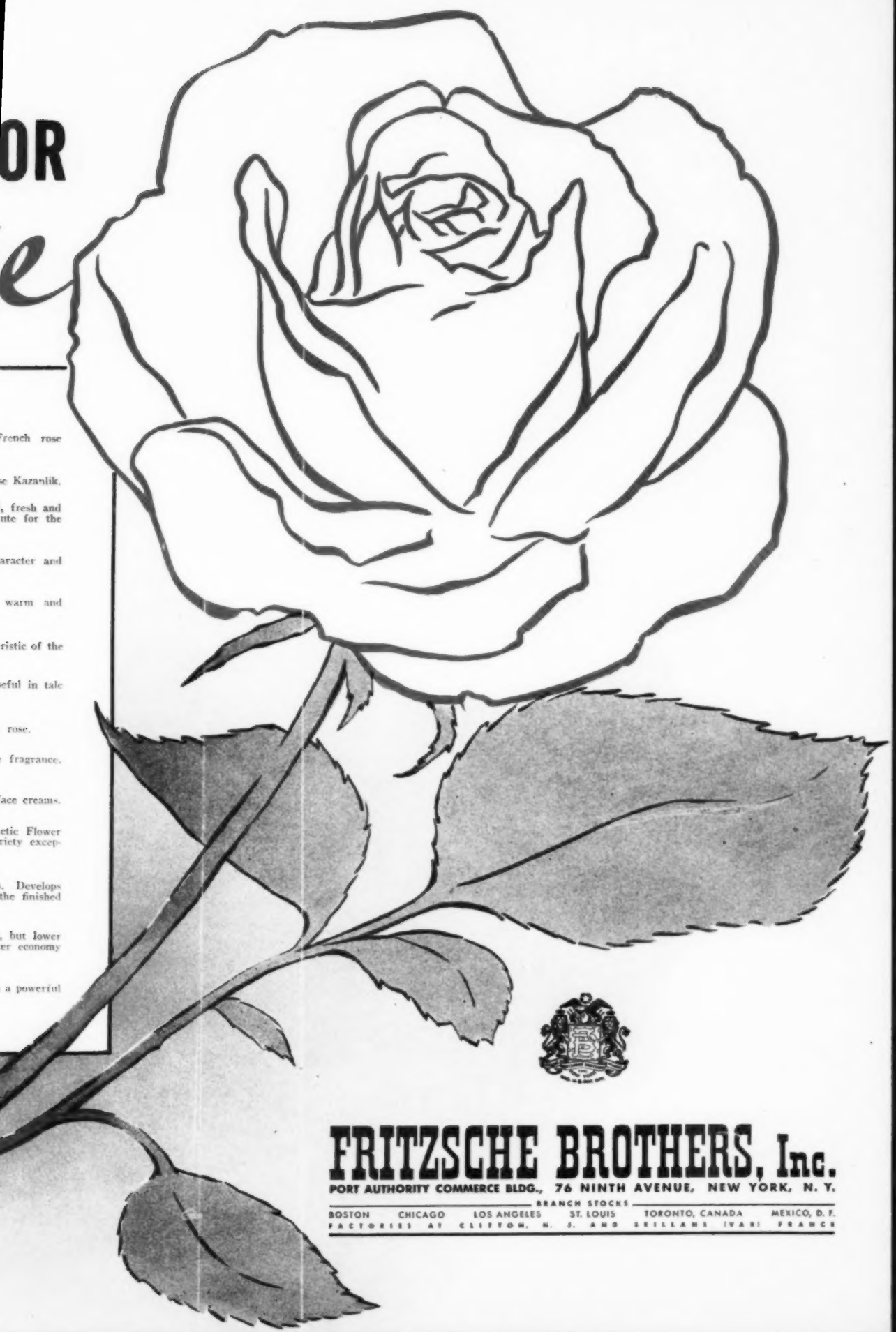
face creams.

etic Flower
riety excep-

. Develops
the finished

, but lower
er economy

a powerful



FRITZSCHE BROTHERS, Inc.

PORT AUTHORITY COMMERCE BLDG., 76 NINTH AVENUE, NEW YORK, N. Y.

BRANCH STOCKS

BOSTON CHICAGO LOS ANGELES ST. LOUIS TORONTO, CANADA MEXICO, D. F.

FACTORIES AT CLIFTON, N. J. AND SEILLANS (VAR) FRANCE

ROSES FOR REMEMBRANCE . . .

THERE is long-to-be-remembered satisfaction in the use of floral ingredients that give your compositions a foundation of honest quality. And you can leave it to your customers and your customers' customers to express their remembrance for such quality in the satisfying terms of *repeat* sales. In offering this month's selection of specialties, we do so with the feeling that they are truly *roses for remembrance,* and as such will prove valuable adjuncts to your goods.

PLEASE UNFOLD THE PAGE

IT MAKES BAD ODORS VANISH . . .

AND that will be a good thing for your product if its natural odor is disagreeable to the point of driving away sales. This amazing odor neutralizer has behind it a record that few such products can approach . . . the practical endorsement of hundreds and hundreds of highly satisfied users. If you have a product whose odor is a problem . . .

PLEASE TURN THE PAGE

FRITZSCHE BROTHERS, Inc.

NEUTROLEUM

MAKES BAD ODORS VANISH!

TODAY, bad odors are stealing off with many a manufacturer's profits . . . are actually robbing him of sales. We contend that this waste imposed upon numerous technical products by the repellent character of certain basic constituents, is a needless loss and that it can be overcome completely and economically by this widely used, time-proven odor neutralizer . . . NEUTROLEUM. A powerful aromatic created by our laboratories for just this purpose, NEUTROLEUM makes quick, permanent dispatch of the most persistent and objectionable odors.

A glance at the accompanying list of applications representing some of the uses to which NEUTROLEUM is being successfully applied, is clearly indicative of its practicability as a deodorant for technical use. We believe we can prove this to you conclusively if you will send us a sample of your product which will be returned to you effectively deodorized as a demonstration of what NEUTROLEUM can do toward eliminating this needless handicap to your product's sales.

AMONG TODAY'S USERS OF NEUTROLEUM ARE MANUFACTURERS OF:

- FLY SPRAYS
- INSECTICIDES
- EMBALMING FLUIDS
- PHOTO ENGRAVING SUPPLIES
- PRINTING INKS
- PRESSROOM SPECIALTIES
- SOAPS
- LEATHERS
- PAINTS
- PENETRATING AND CUTTING OILS
- TEXTILE CHEMICALS
- HOSPITAL DEODORANTS
- STARCH
- BATH PRODUCTS
- SULPHONATED OIL PRODUCTS
- WAXES
- JANITORS' SUPPLIES
- LABORATORY SUPPLIES
- DRAWING COMPOUNDS FOR METAL WORK
- SHOE POLISHES
- DENTAL SUPPLIES
- GLUES
- METAL CLEANING COMPOUNDS
- OILS AND GREASES
- . . . and MANY OTHERS

FRITZSCHE BROTHERS, Inc.

PORT AUTHORITY COMMERCE BLDG., 76 NINTH AVENUE, NEW YORK, N. Y.

BRANCH STOCKS

BOSTON CHICAGO LOS ANGELES ST. LOUIS TORONTO, CANADA MEXICO, D. F.

FACTORIES AT CLIFTON, N. J. AND BRISBANE (VALLEY) CALIF.

Cyclic Ketone in Pennyroyal Oil

According to an abstract in the *Manufacturing Chemist*, the Swiss expert on essential oils, Y. Naves, has just reported the presence of d,*l*-trimethyl-1.3-cyclopentanone in the oil from *Mentha pulegium* L. (*Helv. Chim. Acta.* 27:51, 1944). He isolated it from the terpene and alcohol fractions of the oil after observing that they contained a substance which formed an oxime and a semicarbazone, but showed no aldehydic properties. It was thus a ketone which boiled at 159.5°-160-5° C. under atmospheric pressure and had the following constants:

Specific gravity at 20°/4°C.... 0.8748
Optical activity (C line, 20°C.) 1.42933
Optical activity (D line, 20°C.) 1.43162

The yield was small, but appreciable quantities could be obtained. Thus, 113 Kg. of original oil of pennyroyal gave 1,850 Gm. of the fractions from which 21 Gm. of the ketone was separated as its oxime. This ketone product was practically all trimethyl-cyclopentanone.

The *d,l*-trimethyl-1.1.3-cyclopentanone is not the first cyclic ketone to be extracted from essential oils. Jasmone and pyethrolone are also cyclopentanones, while nepetalic acid and nepetalactone (both cyclic ketone bodies) have been recently identified in plant oils.

Vanillin from Tung Nut Shells

In connection with a study of the composition of tung nut shells, M. Phillips found that their lignin content as determined by the fuming hydrochloric acid method was nearly 45 per cent, although the percentage of methoxyl in this lignin was considerably lower than that generally found in the lignins from wood. Therefore, in view of the relatively high percentage of lignin in tung nut shells, it was of interest to determine the yield of vanillin that might be obtained from this material. His findings, reported as Contribution No. 121 from the U. S. Agricultural Chemical Research Division, were published in the *Journal of the Association of Agricultural Chemists* (Vol. 27, No. 1).

In order to determine the optimal temperature for obtaining the maximum yield of vanillin from ground, dried tung nut shells, a series of experiments was carried out in which the temperature of the reaction was the sole variable. The experiments were conducted in an iron, high-pressure autoclave equipped with a thermometer well and an automatic stirrer. An aqueous sodium hydroxide solution plus nitrobenzene were used to isolate the vanillin. Determination of vanillin yields, given in the accompanying table, showed that the best results were obtained when the reaction temperature was 170° C.

	VANILLIN YIELD	
Reaction temperature	*Calculated on basis of tung nut shells.*	*Calculated on basis of lignin in tung nut shells.*
°C.	*Per cent*	*Per cent*
150	2.54	5.07
160	2.96	5.90
170	3.22	6.40
180	2.62	5.21

Phillips also carried out an experiment in order to actually isolate vanillin. The yield of vanillin crystals, identified by their melting point, was approximately 1.5 per cent of the weight of the tung nut shells.

Experiments were also conducted in which the concentration with the alkali used in the same reaction was varied, but no significant changes in the yield were obtained.

Antioxidant Studies

During investigations on maleic acid and fumaric acid as antioxidants for fats and oils, report H. P. Kaufmann and W. Wolf (*Fette u. Seifen* 50:218, 1943) butterfat, olive oil, corn oil and poppyseed oil were treated with these acids in open Erlenmeyer flasks in diffused daylight. Acid concentrations of 1:10,000 showed little effect in preventing spoilage of the oil by atmospheric oxygen for up to 20 weeks exposure. However, dimethyl maleate, dimethyl fumarate and distearyl maleate showed a noticeable antioxidative effect at 1:1000 concentration, but the action varied somewhat with the type of oil.

Lavender Essence

In a paper published by Etablessements Antoine Chiris (*Bull. soc. Chim.* 30:454, 1943) it was reported that a lavender essence had been obtained by distillation with steam of "Lavandula Delphiaensis." The analysis of the components soluble in sodium acid sulfite yielded the following percentages: butyraldehyde 0.01; isovaleraldehyde 0.02; hexenal 0.016; caprylaldehyde 0.03; citronellal 0.016; capraldehyde 0.028; citral 0.016; cumaldehyde 0.028. plus traces of 2-furaldehyde. The following components are soluble in sodium carbonate solution in the following percentages: acetic acid 0.003; butyric acid 0.002; isovaleric acid 0.0007; caproic acid 0.0037; capric acid 0.0025; coumarin 0.04; thymol 0.005; eugenol 0.005.

Costus Oil

According to E. Guenther, in a review cited in *S.P.C.* for June 1944, oil of costus root is one of the most valuable ingredients employed in high-grade perfumes. Particularly useful in bouquets of the oriental type, it blends very well with sandal, vetiver, patchouli, rose and geranium. The odor of costus root oil is peculiar, heavy and very lasting. In the hands of a skilled perfumer, unique effects can be achieved with this interesting and rare essential oil. The costus root of the ancients, or *kuth*, as it is called in Kashmir, has been used in Hindu, Chinese, Greek and Roman medicine since remote ages. It has been praised as an aromatic stimulant against fever, cough, asthma, dyspepsia, skin diseases, ulcers, stomach troubles, cholera and as a potent aphrodisiac. In Kashmir it is employed to preserve woolen fabrics; in China, as an incense.

Essence of Lavandula Pedunculata

In their series of studies on the aromatic flora of Morocco, J. Gattefosse and G. Igolen (*Compt. rend.* 214:885, 1942) state that the essence obtained in 0.135 to 0.25 per cent yield by distillation of the fresh flowers of *Lavandula pedunculata*, Cavanille var. atlantica Braun-Blanquet, over an open flame consists of carvacrol, *B*-pinene, cineole, *l*-borneol, (free and esterified), *l*-camphor, *l*-cadinene and a solid compound melting at 109° C. The content of *l*-camphor is said to be quite high.

French Bitter Orange-Peel Oil

In a comprehensive study of French bitter orange-peel oil, G. Igolen and D. Sontag (through *Chem. Zentr.* 1:2248, 1943) reported the following constants for the oil expressed from the fruit of *Citrus bigaradia* Risso:

Specific Gravity at 25°C. 0.857-0.860
Specific rotation at 20°C. 87°13'-92°24'
Index of refraction at 20° C. 1.4745-1.4770
Aldehyde content..... 0.6-0.78%
Evaporation residue.... 5.3-6.3%

Chemical analysis showed the following composition: phenols 0.09 per cent; free acids (formic, acetic, pelargomic, cinnamic) 0.05 per cent; terpenes (*d*-limonene) 92 per cent; sesquiterpenes (specific gravity at 15°C. = 0.921, index of refraction at 20°C. = 1.4980) 0.03 per cent; aldehydes (nonanal, decanal, dodecanal) 0.78 per cent; free alcohols (linalool, terpineol) 0.37 per cent; and esters (linalyl acetate, decyl pelargonate, neryl acetate, geranyl acetate and citronellyl acetate) calculated as lanalyl acetate 2.1 per cent.

LANOLINE

Anhydrous U. S. P. Hydrous

specify ROWAG *quality*

For better creams and ointments

BEESWAX
White U.S.P. Yellow

ALCOLAN
Absorption Base

ROBINSON WAGNER CO.

MANUFACTURERS AND REFINERS

110 East 42nd Street New York 17, N. Y.

ISOPROPYL ALCOHOL AVAILABLE FOR:

SHAMPOOS: Isopropyl Alcohol aids in cleaning hair and scalp thoroughly and in leaving hair soft and lustrous.

HAIR AND SCALP PREPARATIONS: Isopropyl Alcohol as a vehicle for hair and scalp preparations aids the cleansing and antiseptic value of the tonics.

STERILIZING SOLUTIONS: 40% Isopropyl Alcohol will kill dried Bacillus Coli in ¼ minute. 50% Isopropyl Alcohol is equivalent to 70% ethyl alcohol for killing Bacillus streptococcus and staphlococcus

BODY RUBS: Isopropyl Alcohol evaporates slowly, thereby prolonging the cooling effect when used in body rubs. Isopropyl Alcohol has no denaturants.

FACE AND HAND LOTIONS: Isopropyl Alcohol evaporates slowly, has little tendency to dry the skin, and aids in keeping the skin soft.

AFTER SHAVE LOTION: Isopropyl Alcohol is excellent for this product because it aids the after-cooling and skin-freshening qualities of the lotion.

Use 91% Isopropyl Alcohol and Release War Materials

STANDARD ALCOHOL COMPANY

26 BROADWAY NEW YORK, N. Y.

THE BENDER CORP.

Manufacturing Chemists Since 1922

Toilet Water • Cologne • Perfume

BULK AND PRIVATE LABEL

PLANTS IN

NEWARK, N. J. • EAST ORANGE, N. J. • SAN JUAN, PUERTO RICO

Inquiries Solicited

Address all correspondence to East Orange, N. J.

CERTIFIED COSMETIC COLORS

Also

COSMETIC Inorganic Pigments

SUBMIT YOUR INQUIRIES

INTERSTATE COLOR CO., INC.

7 Beekman Street New York City

MODERN COSMETICS

by

Francis Chilson

SECOND EDITION

First American manual on manufacture of Cosmetics! Revised, with many new chapters, covering every phase of Production!

$6 Postage Prepaid

Book Dept.

DRUG & COSMETIC INDUSTRY

101 W. 31st St. New York 1, N. Y.

Pharmaceuticals

CALCIUM LEVULINATE

Calcium Iodobehenate, U.S.P.

Tannigen U.S.P. • Tannalbin U.S.P.

Calcium Camphosulphonate and other salts

Antipyrine Salicylate (pure)

Helmitol • Phenetsal

ALSO: Special products manufactured with your confidential process or with processes developed by us for you.

Write for comprehensive list of organic chemicals of our manufacture. Consult us on your special requirements.

FINE ORGANICS, INC.

Manufacturing Chemists

Executive Office: 211 East 19th St., New York 3, N. Y.

Gramercy 5-1030

ADVANCING THERAPY

Boric Acid Dangers

Boric acid, widely used as a mild antiseptic dressing, may possess hitherto unsuspected dangers. According to an item in *Science News Letter* for July 15, 1944, a warning against the use of boric acid ointment or saturated solution on burns was given by C. C. Pfeiffer, L. F. Hallmann and I. Gersh at the meeting of the American Medical Association. They found that enough boric acid to produce poisoning could be absorbed from 10 per cent boric acid ointment. As much as 75 per cent may be absorbed when a 5 per cent solution of boric acid is used to wash out body cavities. Repeated doses result in the acid being deposited in various body tissues such as brain, fat and liver. Death results from a shock-like syndrome after large doses and from general inanition. Since boric acid is a weak antiseptic, the use of more active and less potentially harmful agents is suggested.

After the Cocoanut Grove disaster in Boston, when boric acid ointment was used under pressure dressings on the victims' burns, the National Research Council issued an official recommendation for its use on burns, but this has since been withdrawn.

Vitamin K for Infants

The high death rate from bleeding in newborn babies, because of hypoprothrombinemia, led H. Lehmann (*Lancet* 1:493, 1944) to determine if the mortality could be reduced by the prophylactic treatment of the infants with a vitamin K analogue. In Sweden, where this work has been carried out, it is concluded that 160 out of 100,000 full-term infants born per annun may be saved by introducing general prophylactic treatment. The vitamin K analogue used was sodium/2-methyl-1:4-naphthohydroquinone disulfate, a stable substance, soluble in water, and relatively inexpensive. The minimal but optimal dose was found to be 0.5-1 mgm., and this was as effective when given by mouth as by injection. In spring, values of prothrombinemia for 50 newborn infants were lower than those for 40 babies in the summer, meaning that a larger dose of vitamin K is probably required in the spring.

Injections for Arthritis

H. W. Crowe (*Lancet* 1:563, 1944) reports good results from the use of a 1 per cent isotonic solution of acid potassium phosphate for the treatment of painful and swollen rheumatic joints. With his technic, the skin around the joint to be treated is first painted with iodine, the fluid present is aspirated and the injection given. In most cases, a single injection of the solution proved sufficient. Of 280 cases so treated, three-fifths obtained lasting relief and temporary relief was given to the remaining number. In one instance, the injection failed and the patient became worse.

Prolonging Penicillin Retention

One of the major disadvantages of penicillin is the speed with which it is eliminated from the body; thus making it necessary to give repeated injections at frequent intervals. A possible solution to this difficulty is suggested in the report by K. H. Beyen and his associates (*Science* 100:107, 1944) on the simultaneous administration of para-aminohippuric acid (shortened to PAHA) and penicillin. In 48-hour experiments on dogs, it was found that if the PAHA blood plasma levels were maintained at 20-30 mg. per cc., the plasma penicillin level could be held at 0.08-0.1 unit per cc.; whereas without the PAHA, the penicillin level was 0.02 units per cc. or less. As the plasma concentration of penicillin was caused to rise by the intravenous infusion of PAHA there was a progressive decrease in renal clearance and urinary excretion of the antibiotic substance. These results, plus the remarkable non-toxic nature of PAHA, indicate that with the use of this agent, it is possible to attain and retain materially higher concentrations of penicillin in plasma than is practicable without the use of excessive amounts of penicillin. The next logical step, it is suggested, is a clinical evaluation of this combination.

Sulfas for Pulpitis

Pulpitis, a condition in which the tooth pulp is undergoing some degree of inflammation, usually means that the tooth must be extracted. M. Eigen (*J. Am. Dent. Assoc.* 31:902, 1944), in a study of more than 100 cases of pulpitis, finds that cases formerly considered hopeless are amenable to treatment with sulfa drugs and zephiran, a comparatively new wetting agent of the quarternary ammonia type with antiseptic properties. In Eigen's procedure each cavity was carefully cleaned out and warm aqueous zephiran (1-1,000) introduced on a cotton pellet. The various sulfonamides, separately and in combination, were then applied to the cavity depths and a mixture of zinc oxide and eugenol was inserted.

In some cases, zephiran alone succeeds in cleaning the condition, but the addition of sulfa drugs appears to give better results. Three cases are detailed in which earache associated with pulpal exposure and apical infection cleared up with apparent physiologic recovery of the pulps.

Wound Healing Acceleration

Experiments performed by Langier and Dugal, reported in *Monthly Science News* (through *N. Y. Times*, July 25, 1944), indicate the efficacy of substances that precipitate calcium, especially oxalic acid, on the speed of healing of open wounds. In approximately 100 carefully controlled experiments on rabbits, it was shown that wounds treated with 8 per cent saline solution plus 2 per cent oxalic acid healed more rapidly than wounds treated with dry dressings. The oxalic acid treatment showed an average acceleration of 22 per cent in healing.

Penicillin in Skin Diseases

In a symposium on the uses of penicillin, I. A. Roxburgh, R. V. Cristie and A. C. Roxburgh (*Brit. Med. J.* 1:524, 1944) reported on the use of this agent in the treatment of certain refractory skin diseases. Cases of sycosis barbae, which had resisted other forms of treatment, were treated with penicillin. Some were cured quickly and have remained so; others were cured but have relapsed since and the relapses have been cured; some were cured, have relapsed and have since not responded to penicillin; and finally one case could not be cured by penicillin. Against impetigo, 11 out of 12 cases were cured in 8 to 9 days by application of penicillin

Your Best Source for ALL Essential Oils

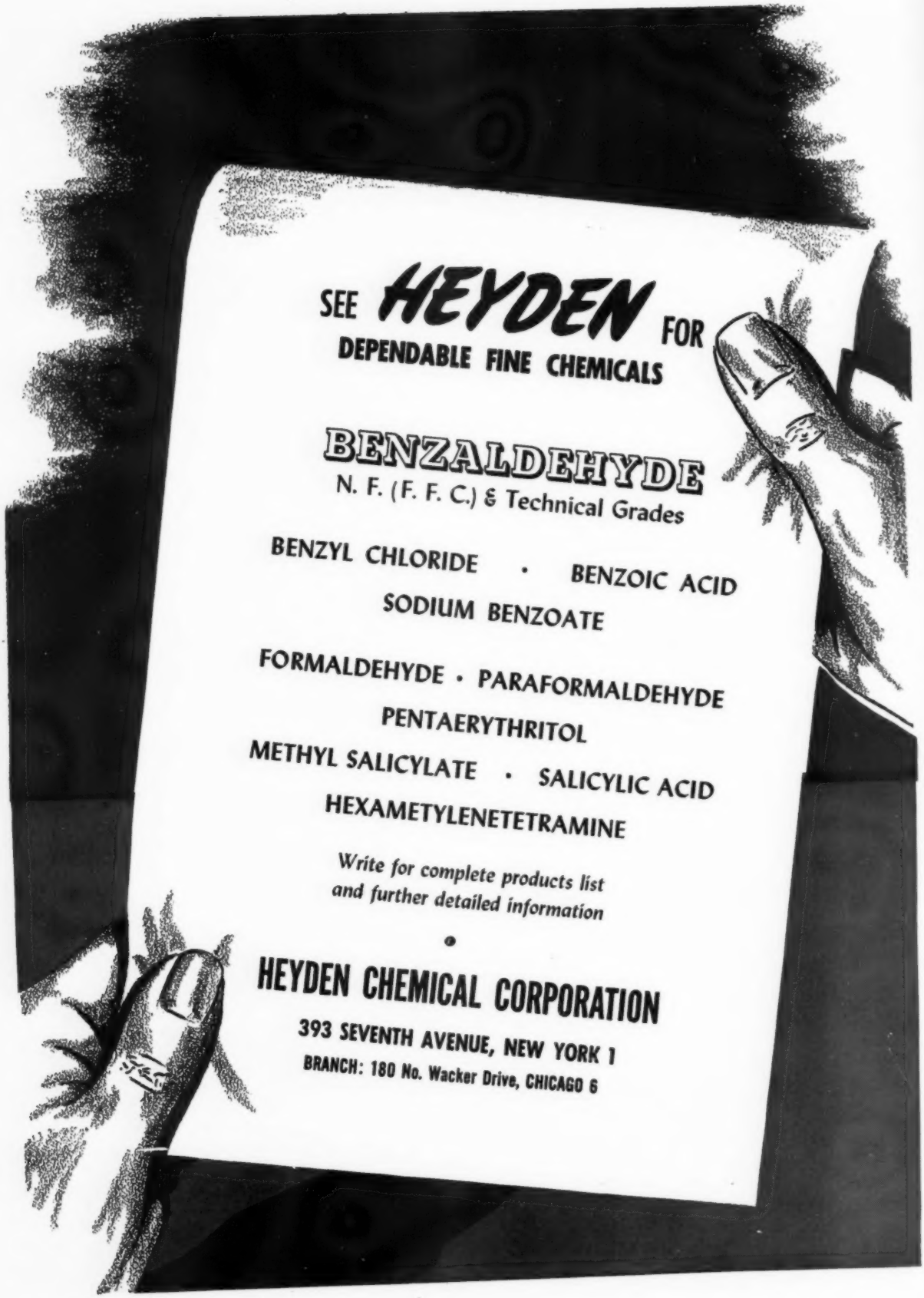
Special Compounds for All Kinds of Soaps, Disinfectants, Sprays and Insecticides

SAMPLES SUBMITTED GLADLY. SEND US YOUR PROBLEMS.

STANDARD SYNTHETICS

30 WEST 26th STREET NEW YORK 10, N. Y.

BRANCHES IN: CHICAGO SAN FRANCISCO KANSAS CITY, MO.


SEE HEYDEN FOR
DEPENDABLE FINE CHEMICALS
BENZALDEHYDE
N. F. (F. F. C.) & Technical Grades
BENZYL CHLORIDE • BENZOIC ACID
SODIUM BENZOATE
FORMALDEHYDE • PARAFORMALDEHYDE
PENTAERYTHRITOL
METHYL SALICYLATE • SALICYLIC ACID
HEXAMETYLENETETRAMINE
Write for complete products list
and further detailed information
HEYDEN CHEMICAL CORPORATION
393 SEVENTH AVENUE, NEW YORK 1
BRANCH: 180 No. Wacker Drive, CHICAGO 6

ointment. Individual lesions healed in about 4 days. It was felt that penicillin was more rapid in its action than quinoline emulsion or the sulfonamides.

Cases of eczema were treated with penicillin incorporated in a Lanette Wax SX base, but it was suggested that the benefits obtained were perhaps due more to the base than to the drug. Both the sodium and calcium salts were used in lanette wax and petroleum jelly base to have a strength of 400 units per gram. Blepharitis, in advanced form of conjunctivitis, was also treated with these penicillin salts in an ointment and with drops containing 500 units per cc. Initial responses were good, but there were many cases of relapse after an apparent cure, and it is felt that further supplies of penicillin are necessary to give longer treatment.

With penicillin ointment and solution used against otitis externa there were good results, but the organisms responsible were of mixed species and some were found to be insensitive to penicillin while other cases were found to relapse. It was found that the ointment is more economical than the solution for such cases and is simpler to use.

Penicillin ointment appeared to have some beneficial effect in preventing the recurrence of boils. It was thought, however, that the solution would prove to be more effective. Penicillin appeared to have no effect on the evolution of boils when applied externally. In patients with acne it was noted that the responsible organisms were resistant to penicillin and any beneficial effects observed were attributed to the drug's action upon the secondary staphylococcal infection.

From these observations, it was concluded that penicillin is of value in sycosis barbae, impetigo and blepharitis. It is effective in some cases of chronic eczema with secondary infections and in some cases of otitis externa.

Plasma Sheets for Burns and Wounds

In a paper in the *United States Naval Medical Bulletin* (42:1171, 1944), B. Pollock presents a new method for treating burns which seems to overcome many of the objections noted with tannic acid, triple dye and other coagulants. In his opinion, the ideal coagulum should be durable, noncontractile, indefinitely pliable, nontoxic, nonirritant, resistant to trauma, bactericidal, painless and not unsightly and should contain fibrin. Dried plasma sheets apparently come closer to fulfilling these criteria than any other coagulum introduced.

To prepare a transparent, slightly elastic, adherent coagulum for burns or for the treatment of indolent, ulcerating war wounds, from 1.5 to 2 Gm. of dried plasma are dissolved in 20 cc. of sterile water in a Petri dish about 4 inches in diameter, after which 0.2 Gm. of sulfanilamide powder is added. The preparation is dried in an oven at 140° C. for 15 to 20 minutes until a firm sheet forms. After cooling, the sheet is applied directly to the burned area after debridement, or to the wound. Within a few moments the plasma sheet becomes adherent, and within a few hours strands of fibrin can be seen securing the plasma sheet to the burn. Plasma loss is stopped immediately. Dressings may be used but are not essential.

Plasma sheets may be preserved for a period of weeks by keeping them moistened with water in a refrigerator. Another method is to heat the preparation until it has been completely deprived of moisture, leaving crisp, dry sheets which may be stored without refrigeration.

Red Cell Paste for Ulcers and Wounds

In attempting to apply fresh human red blood cells to ulcers, C. K. Murray and C. M. Shaar (*J.A.M.A.* 125:779, 1944) were faced with the problem of making the cells adhere to the wound. To overcome this difficulty they prepared a paste made with red cells obtained as a by-product of plasma production. The procedure employed is as follows: After the plasma is removed, the aspirating needle is plunged to the bottom of the red blood cell pack and 250 cc. of fresh type O cells are drawn over by means of a vacuum into a sterile 300 cc. dispensing bottle. Seventy-five cc. of 1:1,000 hexylresorcinol solution is placed in a sterile pyrex glass beaker. Powdered tragacanth (2.5 Gm.) is dusted on the surface, a sterile covering applied and the mixture kept in the beaker for several hours, until a gelatinous mass forms. This is sterilized by heating in a water bath for twenty minutes at 100° C. On cooling it is removed from the beaker with a sterile spatula and 25 Gm. introduced into the 300 cc. bottle containing 250 cc. of the sterile red cell concentrate. After thorough mixing by agitation, the paste is stored at from 2 to 5° C. while not being used.

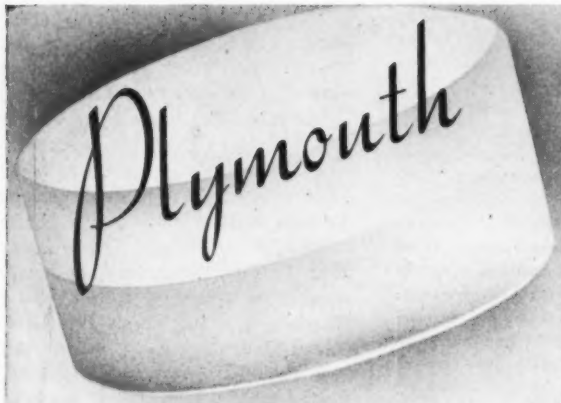
Because of the difficulty of maintaining adequate control measures in the application of this paste to open wounds, it was first decided to treat indolent ulcers which had failed to heal under the usual methods of treatment. Many of these ulcers rapidly healed. Other types of wounds—burns, deep granulating areas and the like—were thus treated. The most gratifying results were obtained in the type of lesion which fails to maintain the usual process of repair because of circulatory disorder. When the paste was applied to a dry, superficial wound it formed an impervious coating which finally became adherent to the wound, but when applied in larger quantities to deeper granulating wounds it appeared to be absorbed to some degree by the involved tissues. Sixty-six patients with open wounds have been successfully treated with red blood cell paste and powdered red blood cells. Four cases failed to improve under this method of therapy.

Ephedrine and Thyroid for Headaches

In the management of headaches which have no definitely demonstrable origin, A. W. Proetz (J. Iowa State Med. Soc. 34:98, 1944) has used 3/8 gr. of ephedrine combined with a mild barbiturate and has found that a large number of headaches were improved by this method of treatment. The drug was not administered over a long period, for in the majority of cases the headache did not recur for some time if improvement had been brought about by the treatment. The author also has found that the administration of thyroid extract relieves many headaches even though the patients are without demonstrable thyroid deficiency. Since it is generally known that the proper functioning of the thyroid depends in large measure on an adequate supply of thiamin, the author has demonstrated that, if he gave thiamin simultaneously, he could increase thyroid administration to an extent otherwise inadvisable in an attempt to eliminate some types of headache.

Dental Caries and Saliva

According to N. C. Turner and E. M. Crane (*Science* 99:262, 1944), a clear relationship has been discovered between the rate of starch hydrolysis by saliva and the incidence of caries in the individual. Without exception among those studied, individuals with extensive caries (e.g. 20 or more cavities) produce saliva which hydrolizes starch with extreme rapidity. Persons without caries produce saliva which causes a very slow starch hydrolysis. In 51 carefully studied cases, not one has been found whose salivary reaction is out of line. A more extensive report, in preparation, will also consider the relationship of fluoride and amino acid in relation to the caries problem.



POWDER BASE NO. 7

Since the introduction of this new face powder material sales of it have constantly increased because the use of it actually represents a development in fine face powders.

Its exceptional silky, soft, smoothness, the complete absence of odor and the extremely fine particle size of it, plus its extraordinary adhesiveness actually improves a face powder in which it is used. As little as 5% added to your formula will bring about this result although it is being used in some face powder to the extent of 15% and a formula is offered showing its use in this percentage.

Samples are at your disposal and we believe that this is one of the Plymouth products which warrants a serious investigation by every face powder manufacturer because it has real merit and will improve your product.

A COMPLETE LINE OF COSMETIC RAW MATERIALS

PLYMOUTH BRAND

M. W. PARSONS

59 BEEKMAN STREET
NEW YORK, N. Y., U. S. A.

Imports AND
PLYMOUTH ORGANIC LABORATORIES, Inc.

TELEPHONE: BEEKMAN 3-3162 — 3163 — 3164
CABLE ADDRESS: PARSONOILS, NEW YORK

We Offer the Following From Stock

ALOES, Curacao and Cape
ALTHEA ROOT
ANISE SEED
BALSAM COPAIBA
BALSAM PERU
BALSAM TOLU
BELLADONNA Leaves and Root
BOLDO LEAVES
BORRAGE FLOWERS
BUCHU LEAVES
CARAWAY SEED
CELERY SEED
CHAMOMILE FLOWERS
CHAULMOOGRA OIL
CLOVES, Zanzibar
COCILLANA BARK
COLOCYNTH PULP
COLOMBO ROOT
CORIANDER OIL AND SEED
CUMIN SEED
DANDELION ROOT
DILL SEED, Indian
ERGOT OF RYE
FENNEL SEED, Indian
FOENUGREEK SEED
GENTIAN ROOT
GINGER, Jamaica, Calicut
GRAINS OF PARADISE
GUM ARABIC AMBER SORTS
GUM KARAYA
HELLEBORE ROOT WHITE
HERBA HERNIARIAE
HERBE MENTHE
HOREHOUND HERB
IRISH MOSS
JUNIPER BERRIES
KAMALA POWDER
LAUREL LEAVES
LAVENDER FLOWERS
LINDEN FLOWERS, with Leaves
MAHUANG, Chinese
MARJORAM LEAVES
NUX VOMICA
OAK MOSS
ORANGE OIL, Sweet
ORRIS ROOT
PEPPERMINT OIL
PIMENTO, Jamaica
POPPY SEED, Indian
PSYLLIUM SEED AND HUSKS
QUINCE SEED
RHUBARB ROOT
ROSEMARY LEAVES
ROSEMARY OIL
SAGE LEAVES
SARSAPARILLA ROOT
SAVIN OIL
SAVORY
SENNA LEAVES AND PODS
SESAME SEED, Hulled and Natural
STRAMONIUM LEAVES
STROPHANTUS SEED
THYME LEAVES & OIL
UVA URSA LEAVES
VALERIAN ROOT

AMINOPHYLLINE
BARBITAL
COD LIVER OIL, Medicinal and Poultry Grades
EHPEDRINE SALTS
GUM CAMPHOR, Japanese and Domestic
ICHTHAMMOL, N.F.
STRYCHNINE SULFATE
VITAMIN PRODUCTS
WAX, JAPAN

• Other Imports Arriving Daily. • We Offer a Complete Line of Pharmaceutical Pills, Tablets, Liquids and Ointments.
• All Orders and Inquiries Given Immediate Attention.

KACHURIN DRUG COMPANY

Manufacturers • *Importers* • *Exporters* • *Distributors*

DRUGS - CHEMICALS - OILS - BOTANICALS

525 West 43rd Street, New York, N. Y.

Telephones: BRyant 9-7400-1-2-3-4 • *Cable Address:* Kachurin, New York • *Codes:* A. B. C. 5th & 6th Edition and Bentley's

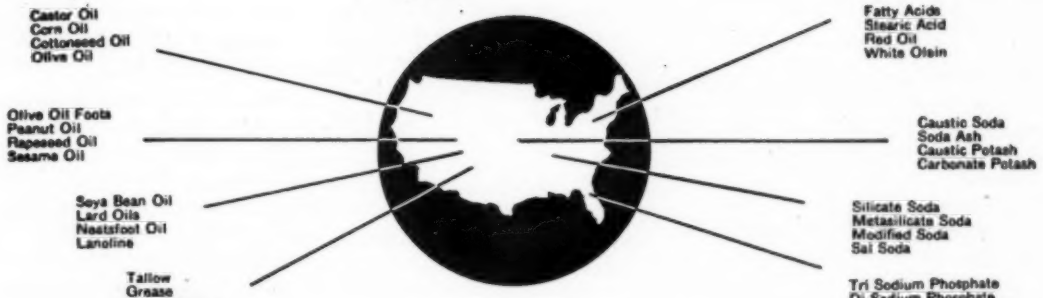
YOU CAN DEPEND NOW AS ALWAYS ON SHERWOOD'S
CONSISTENTLY HIGH QUALITY AND PERSONALIZED ATTENTION

white oils

petrolatums
ceresines, white and yellow

SHERWOOD REFINING COMPANY, INC.
THE REFINERY OF CONTROLLED SPECIALIZATION
ENGLEWOOD, N. J. Refinery: — WARREN, PA.

RAW MATERIALS for the DRUG & COSMETIC INDUSTRY



TRY THIS SERVICE!
Let Us Mix
Your Private Formulas

LAMEPON K—A soapless and limestable detergent for Textiles, Soaps, Insecticides, Sanitary Cleaners, Laundry Products.

LAMEPON 4C—A foaming and wetting agent of slightly acid reaction for cosmetics.

For samples and information write to

WELCH, HOLME & CLARK CO., Inc.
563 GREENWICH STREET ESTABLISHED 1838 NEW YORK CITY

Compounder's Corner

New Skin Protective Cream

According to J. G. Downing, L. M. Ohmart and M. J. Stoklosa (*Arch. Dermat. & Syph.* 49:436, 1944) creams used to protect the skin of industrial workers should contain no irritating or sensitizing ingredients, they should be capable of easy application and removal, and they should be inexpensive. Because many of the protective creams now available do not meet these requirements, they set out to devise a product that would meet the standards. After a series of tests, the following cream was developed:

Stearic acid	**10.0 Gm.**
White wax	**2.0 Gm.**
White petrolatum	**4.5 Gm.**
Triethanolamine	**1.5 cc.**
Glycerine	**8.0 cc.**
Distilled water	**54.0 cc.**
Talc	**20.0 Gm.**
Perfume	**as desired**

This cream has been tested for four months in industries where workers are exposed to mechanical irritants and various types of grime and it has been found to reduce the incidence of dermatitis due to such causes.

Agar and Its Uses

In the British publication, Chemistry and Industry *(No. 9, 1944, p. 79) it is pointed out that the agar of North American commerce is a mixture of the extractives of several seaweeds. Its chemical structure may vary with the source of the material. Until the war, almost the entire supply of agar (92%) was produced in the Orient. Sources are now being developed in California and Mexico. The agar weed has, however, been harvested regularly on the American coast for twenty years. Divers work in a complete suit, crawling over the rocks on their knees and pulling the weed off by hand. Under good working conditions a man may harvest 1000 wet lb. daily. Little or no weed is gathered in winter. It is dried in the sun. A crude gel is extracted by a simple proc ss of boiling and filtering. The water and impurities are then removed by freezing.*

Shortly after the war with Japan, the United States War Production Board issued an order restricting further use of agar to the preparation of bacteriological media. At that time only 18% used in the United States went into media, the rest for the manufacture of dental materials, laxatives, emulsifiers, confections, and for meat packing and other purposes. Manufacturers of these products have turned to substitutes for agar or have gone out of business along with others similarly affected by the war. It was recently reported that a substitute for Japanese agar had been developed at the University of Wisconsin by using a seaweed from the New England Coast.

Improved Antiperspirants and Deodorants

In the claims and specifications of U. S. Patent 2,350,047, E. Klarmann and L. W. Gates point out that ordinary anti-perspirant and deodorant compositions based on aluminum salts have a tendency to cause deterioration of cotton and cellulosic fabrics. This disadvantage, they claim, can be overcome by the concurrent use of water-insoluble basic metal compounds, such as the oxides, hydroxides or carbonates of zinc, magnesium or aluminum, in the proportions of about 1 to 3 per cent. Contrary to expectations, these water-insoluble basic compounds will dissolve when added to the solution of astringent compound.

Several illustrative formulas are included in the patent. For example, a typical perspiration retarding or inhibiting lotion may be prepared from:

Aluminum sulfate	**18.0 parts**
Zinc oxide of magnesium oxide	**3.0 "**
Alcohol	**10.0 "**
Water	**69.0 "**

A creamy product may be made from

Aluminum chloride	**15.0 parts**
"Tegacid"	**15.0 "**
Spermaceti wax	**3.0 "**
Beeswax	**2.0 "**
Magnesium oxide	**2.5 "**
Water	**62.5 "**

New "Cold" Permanent Wave Patent

To overcome the disadrantages of older methods and to facilitate the "cold" permanent wave procedure is the aim of H. Martin. In U. S. Patent 2,350,178 it is stated that for more rapid work, it is possible to use thioglycolic acid as an accelerator. Thus, the following solution is applied to the hair after it has been wound upon rods:

Thioglycollic acid	**10 Gm.**
Sodium hydroxide	**7 Gm.**
Hydroxylamine sulfate	**10 Gm.**
Water	**100 cc.**

At the end of fifteen minutes, the hair is treated with the following solution:

Water	**500 cc.**
Hydrogen peroxide (20 volume)	**500 cc.**
Tartaric acid	**30 Gm.**

The hair is left for five minutes and grows warmer than body temperature and is then washed after it has cooled. It is claimed that the resulting curls are shiny, soft and permanent.

If standard extract of witch hazel is substituted for the water, the slight odor of thioglycollic acid almost disappears and the pH is lowered, making it useful for home use where no skill is needed.

Canadian Permissible Errors

Through the *Pharmaceutical Journal* (153:5, 1944) we learn that on the recommendation of the Canadian Committee on Pharmacopoeial Standards, an Order in Council has been made setting up standard permissible errors for the quantity of active ingredients contained in tablets, capsules, etc., and ampoules. The following are the permitted limits of variability from the labelled amount for drugs "put up in the form of tablets (including hypodermic tablets) or capsules or other individual dosage or dispensing form other than ampoules":—

Dosage	*Limits of Variability*
5 grains or over	94-106 per cent
½ grain to 5 grains	93-107 per cent
1/20 grain to ½ grain	92-108 per cent
1/100 grain to 1/20 grain	91-109 per cent
Less than 1/100 grain	90-110 per cent

There are two exceptions: vitamin preparations must contain not less than

a **D**ow-perfected product that meets your exacting needs

DOW PROPYLENE GLYCOL, N.F.

PROPYLENE GLYCOL IS NO LONGER ON GOVERNMENT ALLOCATION

A recent accomplishment of Dow laboratory and production research is the new Dow Propylene Glycol, N.F. Formulated to the highest standards of purity . . . produced in quantity by Dow-devised methods which assure full retention of fine quality, clarity and excellent characteristics of taste and odor . . . Dow Propylene Glycol is now shipped in new resin-lined, product-protecting containers. Thus, from laboratory to user, the purity of Dow Propylene Glycol is constantly and vigilantly safeguarded. This widely useful liquid is clear, colorless, slightly viscous; it is completely miscible with water, alcohol, acetone, chloroform and various other organic liquids; it has diversified solvency properties; and it is a superior preservative and hygroscopic agent. In these ways, and in many more, Dow Propylene Glycol is proving exceptionally valuable in meeting the exacting needs of many fields of industry. It may well be profitably applied in your business.

FOR THE PHARMACEUTICAL INDUSTRY

- ✓ *Emollient and lubricant*
- ✓ *Humectant for many products*
- ✓ *Solvent and preservative*

DETAILED INFORMATION that may suggest new economies and efficiencies in your business is contained in a special Dow Propylene Glycol booklet. Physical data, charts and technical specifications are included. Dow will be glad to send you a copy promptly upon request.

THE DOW CHEMICAL COMPANY, MIDLAND, MICHIGAN

New York • Boston • Philadelphia • Washington • Cleveland • Detroit • Chicago
St. Louis • Houston • San Francisco • Los Angeles • Seattle

DOW

CHEMICALS INDISPENSABLE TO INDUSTRY AND VICTORY

The Orange Oil
With Freshest Flavor
And Truest Aroma!
Orange Oil is *our* business, and EXCHANGE Brand is your assurance of matchless *flavor*, *freshness*, and *uniformity* — your benefit of over 20 years of our experience in satisfying the requirements of American users.
Ask our Jobbers for Samples
DODGE & OLCOTT COMPANY
180 Varick Street, New York14, N. Y.
FRITZSCHE BROTHERS, INC.
76 Ninth Avenue, New York 11, N.Y.
Distributors for: CALIFORNIA FRUIT GROWERS EXCHANGE PRODUCTS DEPT., ONTARIO, CALIF.
Producing Plant:
Exchange Orange Products Co., Ontario, California
Copyright 1943, California Fruit Growers Exchange, Products Dept.
Exchange
OIL OF
ORANGE
U. S. P.

95 per cent of the labelled amount, and preparations of glyceryl trinitrate, 85-115 per cent of the specified quantity. Where there are several ingredients the amount of each ingredient must be not less than 90 nor more than 110 per cent of the amount described on the label, except that the compound vitamin preparations must contain not less than 85 per cent.

Where drugs are prepared ready for injection in the form of ampoules, each ampoule must contain the following excess volumes, stated below:

Desired Dose Mil	*Excess for Mobile Solutions* Mil	*Excess for Viscous Solutions* Mil
0.5	0.10	0.12
1.0	0.10	0.15
2.0	0.15	0.25
5.0	0.30	0.50
10.0	0.50	0.70
20.0	0.80	0.90
50.0	1.00	1.50
100.0	2.00	3.00

Creamy Nail Polish Remover Patent

A. Dreyling has been granted U. S. Patent 2,351,195 for a finger nail enamel remover composition in cream-like form. This contains about 70 per cent by weight of a substantially anhydrous organic solvent capable of dissolving nitrocellulose, and the remainder of the preparation comprises a mixture in the ratios by weight of 10 parts of a solid fatty acid such as stearic and palmitic acids, 2 to 4 parts of ethyl cellulose, 2 to 10 parts of a comsetic aid (e.g. castor oil, olive oil and lanolin) and 2 to 4.6 parts of concentrated ammonia water.

Absorption from Ointment Bases

In a new approach for testing absorption from various ointment bases, J. Rae (*Brit. J. Dermat. & Syph.* 56:92, 1944), took advantage of the fact that crystalloids in solution pass through a transparent cellulose film if placed in distilled water. Rae felt that the results obtained probably represent what takes place when an ointment is applied to broken skin. The medicament employed was 2 per cent sodium chloride; chosen because of its ready solubility and because it could be accurately estimated by titration with decinormal silver nitrate solution. The procedure employed was as follows: A sheet of cellulose film, 5 in. by 7 in., was moistened with distilled water in the center and placed over the rimmed end of a piece of glass tubing 10 cm. long and of 2.5 cm. internal diameter, open at both ends but having a slight external rim a one. The film was drawn well up the side of the tube and secured with a rubber band. Twenty-five Gm. of the ointment to be tested was introduced into the tube through the open end, and gently forced against the cellulose film by pressure applied by means of a circular wooden stick which just fitted inside the glass tube. Fifty cc. of distilled water was placed in a small beaker, and the tube supported by a suitable retort clamp placed in it so that the end containing the ointment covered with the cellulose film was immersed to a depth of about ½ in. This was left for twenty-four hours for diffusion to take place. The water in the beaker was transferred to a porcelain titration pot, the beaker being rinsed out with a further 50 cc. of distilled water. This solution was then titrated with N/10 silver nitrate solution, using a solution of potassium chromate as an indicator.

For the purpose of comparison some of the older types of greasy ointment bases were tested at the same time; the salt being dissolved in a minimum amount of water and then incorporated into the bases. Although all the water-soluble bases require a preservative, such materials were omitted in testing these bases in order to avoid reaction with the test solution. The results of these tests are summarized in the following table:

	Base	*C.c. N/10 Ag No₃*
1.	Lard	0.1
2.	Hydrous wool fat	0.2
3.	White soft paraffin	0.2
4.	Simple ointment B.P.	0.4
5.	Lanette wax SX 10% in distilled water + 10% white soft paraffin	2.7
6.	Lanette wax SX 10% in distilled water	4.0
7.	Methyl cellulose 10% in distilled water + 50% white soft paraffin	5.8
8.	Glycerin of starch B.P. 1914	6.9
9.	Lanette wax SX 10%, pectin 100 grade 2.5%, liquid paraffin 10%, distilled water to 100	7.5
10.	Lanette wax SX 10%, pectin 100 grade 2.5%, distilled water to 100	8.6
11.	Methyl cellulose 5%, lanette wax SX 5%, distilled water to 100	8.8
12.	Tragacanth 2% in distilled water	11.5
13.	Karaya gum 2% in distilled water	12.5
14.	Methyl cellulose 10% in distilled water + 25% white soft paraffin	12.6
15.	Methyl cellulose 10% in distilled water + 10% white soft paraffin	13.6
16.	Methyl cellulose 5% in distilled water	13.8
17.	Methyl cellulose 10% in distilled water	14.9
18.	Quince seeds 2% in distilled water	17.9
19.	Lanette wax SX 10%, pectin 100 grade 5%, distilled water to 100	19.0
20.	Pectin 100 grade 5% in distilled water	23.8

Improved Coal Tar Ointment

J. G. Downing, L. M. Ohmart and G. Di Cicco (Arch. Dermat. & Syph. *49: 421, 1944*) *point out that crude coal tar is one of the most efficient and useful substances employed in treating skin diseases. However, one of the disadvantages encountered in the use of ointments and pastes containing coal tar lies in the difficulty of their removal from the body. Removal is facilitated by use of olive oil or some other fixed oil, but this method has its own obvious disadvantages. Even with the aid of a fixed oil, removal is not easy from a body surface which is hairy or where the skin is not intact. Since the physical nature of petrolatum appears to be the cause of the difficulty, a special base was prepared and used in place of the usual petrolatum in the following preparation:*

Crude coal tar	**2.0 Gm.**
Zinc oxide	**2.0 Gm.**
Starch	**15.0 Gm.**
Special base	**15.0 Gm.**

The special base contained 5 per cent of diglycol stearate and 95 per cent of petrolatum and was prepared by fusing these two substances together and stirring the product until it congealed.

The coal tar ointment prepared in this manner is easily removed from body surfaces with dry tissues or fabrics or by the use of soap and water.

Streptothricin

Although the isolation and properties of streptothricin were reported in 1941, very little has been written concerning the toxicity and activity of this bactericidal substance obtained from he soil organism, *A. lavendulae*. This situation has been remedied in the report of H. J Robinson, O. E. Graessle, and D. G. Smith in *Science* (99:540, 1944). Their experiments indicate that crude streptothricin is markedly effective *in vitro* against many grampositive and-gram-negative organisms. Mice heavily infected with a variety of gram-negative organisms are completely protected by administering small amounts of streptothricin. Although the drug is more effective parenterally than orally, preliminary studies show that it greatly reduces the lactose fermenting bacteria of the intestinal tract. Since this action is similar to that of certain sulfonamides, it is suggested that streptothricin may be of value in bacillary dysentery and typhoid fever. Its effectiveness against many organisms plus the fact that body fluids have no apparent effect on its action, suggest that crude streptothricin may be of great value in infected wounds and burns.

Ointment for Sunburn

According to a European writer, J. Hojka (*Chem. Zentr.* 1:686, 1943) an excellent ointment for sunburn may be prepared by gently heating and mixing:

Peanut oil	**60 Gm.**
Spermaceti	**8 Gm.**
White beeswax	**7 Gm.**
Then add:	
Calcium acetate	**5 Gm.**
Distilled water	**20 Gm.**

NATURAL ABYSSINIAN CIVET

HIGHEST QUALITY IN ORIGINAL HORNS

Samples and quotations on request

J. C. Andresen

132 Nassau St. New York, N. Y.

Phone: BEekman 3-4700

BILE SALTS
CHOLESTERIN
IRON PEPTONATE

THE WILSON LABORATORIES

4221 So. Western Ave., Chicago, Ill.

also

816 First Ave., New York
Drexel Bldg., Philadelphia
869 Folsom St., San Francisco
1608 E. 15th St., Los Angeles
619 Clark Ave., St. Louis

ALKALOIDS

GLUCOSIDES---DRUG EXTRACTIVES

As in **WORLD WAR I**

Now in **WORLD WAR II**

ACONITINE
ARECOLINE
ASPIDOSPERMINE
ATROPINE
BERBERINE
CHRYSAROBIN
COLCHICINE
DIGITALIN
EPHEDRINE
ESERINE
HOMATROPINE
HYDRASTINE
HYOSCINE
HYOSCYAMINE
LOBELINE
PICROTOXIN
PILOCARPINE
SANGUINARINE
SPARTEINE
STROPHANTHIN
YOHIMBINE

INLAND ALKALOID CO.

MANUFACTURING CHEMISTS

TIPTON INDIANA U. S. A.

PURCHASING DEPARTMENT

European Essential Oils Very Scarce; Little Definite Information Available from France

Supplies of imported essential oils from France and Italy have reached the vanishing point and some manufacturers, rather than use substitutes, have withdrawn certain of their products from sale.

Just how soon these oils will be available is hard to tell. Some members of the trade, pointing out that little in the way of definite information has been available for about a year and a half, were inclined to be pessimistic. Their information was that the important flower-growing areas in France has been given over to vegetable growing by the Germans. Others doubted this, contending that the Nazis had recognized the importance of the industry and kept it going. The availability of perfume in stores in occupied Normandy was cited.

The chief essential oils from France include jasmine, tuberose, hyacinth, jonquil, mimosa, orange blossom, cassie, carnation and clary sage. Citrus oils would be available from Italy with the liberation of all of that country, it was added.

Lime oil up

While Mexican lime is arriving here regularly and there are ample quantities of the distilled oil available for immediate delivery, expressed oil is scarce with new and higher prices being largely nominal because of restricted offerings. In some instances dealers have been forced to withdraw from the market owing to low stocks.

Currently the market for distilled oil is quoted at from $6.50 to $7.50 per pound with expressed oil at from $11 to $12.50.

Because the demand for lime juice as a source of citric acid has almost ceased, cultivation of limes in the British West Indies has been reduced, states the foreign press. The three main products of limes are the expressed oil, the distilled oil, and the juice.

It is reported that a study of the chemistry of citral and of related products has been undertaken, and several new compounds have been prepared. Preliminary results suggest that this research may develop into a general study of the possibility of utilizing some of the more important constituents of essential oils as raw materials for chemical industry. As soon as materials become available, the chemistry of distilled oil from limes will also be investigated.

Annual production and sale of lime oil by one of the important producers, associations in Mexico, the Union Nacional de Productores de Aceite de Limon, is reported to be about 132,000 pounds, worth about $70,000.

AUGUST PRICE CHANGES

UP

Lime oil dist. 50c
Mercury metal $7
Senna Tinnevelly 1½c
Wahoo bark of tree 1c
Bois de Rose Braz. 50c
Cedar wood oil 25c
Chamomile flowers 5c

DOWN

Sassafras oil artificial 20c
Arabic gum powd. 3c
Arnica flowers 25c
Cardamom oil $5
Celery oil $1.50
Citronella oil Ceylon 5c
Geranium oil African 50c

• Prices quoted in this section were current on the first of this month.

Brazil Mint Oil

Production of mint oil in Brazil from the crop harvested in June of this year is estimated at between 170,000 and 200,000 kilograms. From this quantity, between 80 and 100 tons of crystals will be produced. Total production from the harvests of the past year is estimated at 150 tons of crystals.

The exportation of mint oil under a contract made last year recently was authorized by the Carteira de Exportacao e Importacao of the Bank of Brazil. However, the Carteira stated that all present mint-oil production in Brazil is needed by the domestic menthol-crystal industry, thus indicating that further applications for mint oil exports will not be considered favorably.

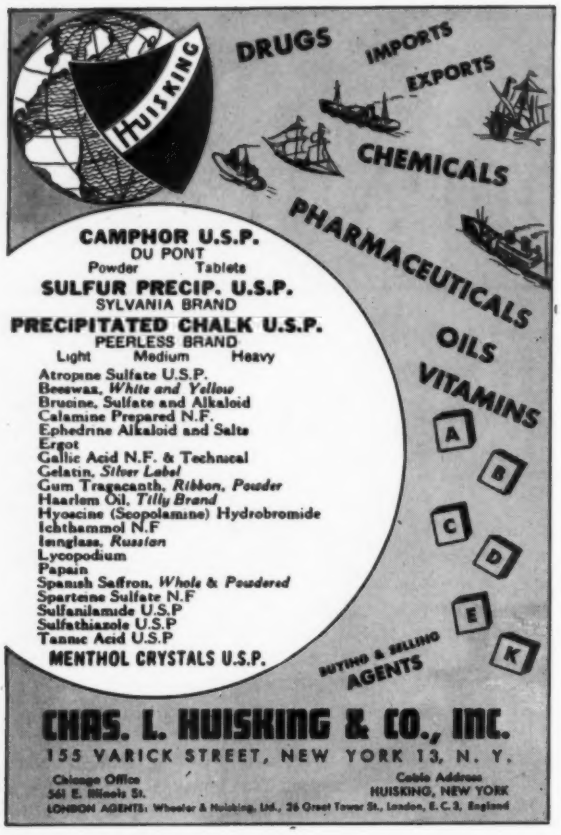
Britain to re-export essential oils

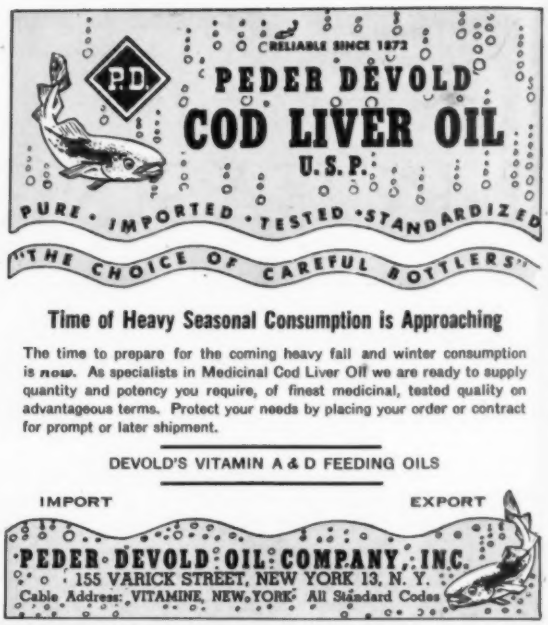
Details of an officially sponsored scheme for the re-exportation of imported essential oils were recently made available to the trade by the Essential Oil Importers' Section of the London Chamber of Commerce, according to the Chemist & Druggist at London. First releases of oils against export licenses were to have been made August 1 and for the first quarter in which the plan will operate, two important oils, distilled lime and eucalyptus, will be made available for export. It is not known just how much oil will be released from time to time, but the use of the term reasonable quantities appears to indicate that the re-export business made possible by the plan will be not insignificant, it is pointed out.

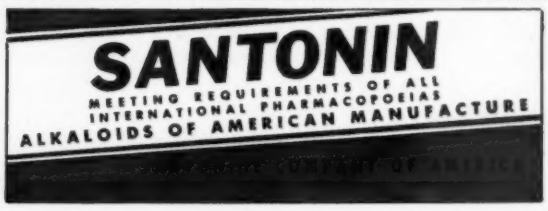
Peppermint prospects good

The Bureau of Agricultural Economics August 1 forecast was for a total peppermint oil production of 1,034,000 pounds. In 1943 the total produced was 826,000 pounds. Spearmint production, however, is likely to be approximately 28,000 pounds below last year's output.

War Food Administration is reported asking for bids on approximately 9,600 pounds of peppermint oil.




RELIABLE SINCE 1872
P.D.
PEDER DEVOLD
COD LIVER OIL
U.S.P.
PURE • IMPORTED • TESTED • STANDARDIZED
"THE CHOICE OF CAREFUL BOTTLERS"
Time of Heavy Seasonal Consumption is Approaching
The time to prepare for the coming heavy fall and winter consumption is now. As specialists in Medicinal Cod Liver Oil we are ready to supply quantity and potency you require, of finest medicinal, tested quality on advantageous terms. Protect your needs by placing your order or contract for prompt or later shipment.
DEVOLD'S VITAMIN A & D FEEDING OILS
IMPORT
EXPORT
PEDER DEVOLD OIL COMPANY, INC.
155 VARICK STREET, NEW YORK 13, N. Y.
Cable Address: VITAMINE, NEW YORK All Standard Codes



Procaine Hydrochloride U.S.P. XII
Procaine Base
Ethyl-Aminobenzoate U.S.P. XII
Butyl-Aminobenzoate U.S.P. XII
Iso-Butyl-Aminobenzoate
Phenacaine-Hydrochloride U.S.P. XII
Eucaine-Hydrochloride U.S.P. XII
Sodium Methyl Arsonate C.P.
Iodophthalein Sodium U.S.P. XII

PUROCAINE CHEMICAL CO.,
INCORPORATED
Manufacturing Chemists

38th Ave. and 10th St., Long Island City, N.Y.

AGAGEL
AND
ALGALOID
(PURE EXTRACTIVES OF IRISH MOSS)

POTENT NATURAL COLLOIDS
COMPLETELY SOLUBLE-NEUTRAL

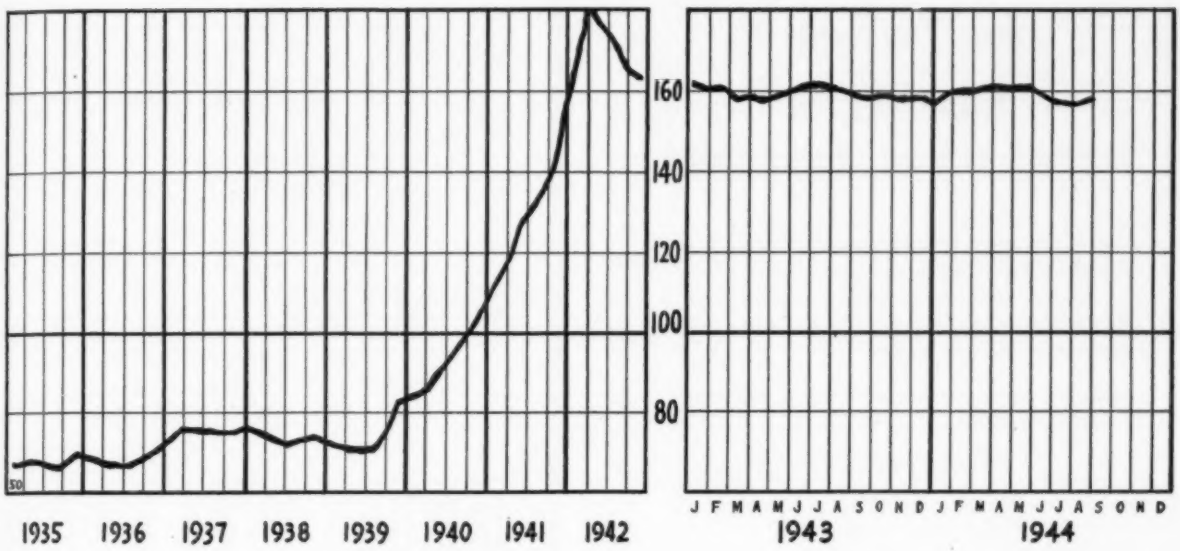
For

Emulsions — Stabilizing
Suspensions — Gel-Formation
Viscosity Control — Mineral Nutrition
Binder — Moisture Retention
Bacteriological Media

T. M. DUCHÉ and SONS, INC.
117-119 HUDSON ST., NEW YORK 13

BOSTON 177 State
CHICAGO 61 W. Kinzie
CLEVELAND 16304 LaVerne Ave.
ST. LOUIS 2115 Pine

50 Raw Materials—Weighted Price Index 1926=100.



The price index of fifty commodities for August advanced to 156.6 from the previous 156.0.

Lend-Lease Takes Huge Supply of Glycerine; Spot Stocks of Crude and Refined Decline

Stocks of both crude and refined glycerine declined about a quarter of a million pounds in June and, according to reports from authoritative sources, a more substantial reduction in stocks will be shown in the July figures when they are completed. Although in normal times glycerin production usually declines during the summer months, the late reduction in stocks is believed to be due to a greater consumption. Many manufacturers who had previously used substitutes have been gradually turning back to glycerin. Its use is so diversified that such an increase in consumption is not at all surprising.

Approximately 800 tons of glycerin for September-October delivery have been purchased for Lend-Lease, it is learned. Some additional Lend-Lease business is expected to be placed later on which is likely to bring the total over 2,500,000 pounds that had originally been expected to have been placed.

The additional purchases, it is believed, will probably extend deliveries into the early part of next year. While the purchase of 400 tons for each month, September-October, will not bring about any material tightening in the domestic market, it will cause major producers to end the year with considerably less material on hand, especially if orders for the additional tonnage are placed.

Producers point out that there is an ample quantity of glycerine on hand to take care of total requirements over the final quarter.

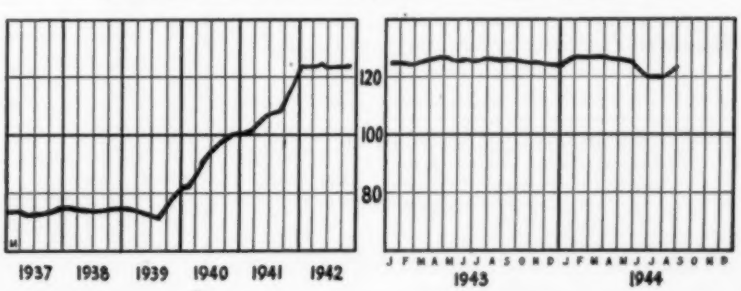
Berberine price set.

A uniform base ceiling price on $36.25 a pound, effective August 17, for producers' and primary distributors' sales of berberine salts was announced August 13 by the Office of Price Administration. Berberine is normally extracted from the bark of barberry root imported from Yugoslavia. Imported raw material is now unavailable and berberine salts are not on the market.

Ascorbic Acid stocks adequate

General Allocation Order M-269 has been revoked, and control of ascorbic acid has been transferred by the WPB to M-300, effective September 1. Of particular interest is the fact that the exempt quantity has been increased to 30 kilos per person per month. Therefore, it will no longer be necessary to indicate end use on orders up to and including that quantity. Orders for more than 300 kilos must carry the M-300 certificate showing end use.

15 Medicinal Chemicals—Weighted Price Index 1926=100.



The medicinal chemicals index advanced to 127.3 from the previous 121.4. Mercury was higher at $105.00 a flask.

Have You Tested

VORAC'S NEW NAIL POLISH

Vorac, first again to incorporate into nail polish formulation remarkable new materials developed by famous research laboratories, gives you a Nail Polish greatly improved in wearing quality, application and appearance.

Make a consumers comparative test with Vorac. It will be revealing.

Write for your samples.

Nail Polish Specialists
Exclusively for the trade

THE VORAC COMPANY
147 Meadow Road Rutherford, N. J.
Tel: Rutherford 2-0934-5
St. Louis, Mo. - 1338 So. Kingshighway

GUMS

ARABIC-Sorts, Granular, Powder
KARAYA-Powder
LOCUST BEAN-Powder
TRAGACANTH-All Grades, Whole, Granular, Powder

GELLOID

(Pure Calcium Carragheen Sulfate)
Binder in Tablet Making
Moisture Retention in Dentifrices

JACQUES WOLF & CO.
Manufacturing Chemists and Importers
PASSAIC, N. J.
California Branch--339 East 2nd Street
LOS ANGELES, CALIF.

Manufacturers of
— AMERCHOL —
ABSORPTION BASES
for PHARMACEUTICAL and COSMETIC preparations

Our Absorption Bases possess inherent emollient and absorption properties because of their high free Cholesterol content.

- Facilitate the penetration and absorption of incorporated therapeutic agents.
- Recommended for ease of emulsification.
- Absorb unusually large amounts of water.
- Form pure white water-in-oil emulsions, completely stable under widely varied conditions.
- Form elegant products of rich texture and consistency.

We also manufacture—
Cholesterol C.P. • Emulsifiers • Ointment Bases • Industrial Penetrants • Softening and Dispersing Agents and other Amerchol products

AMERCHOL products are manufactured from specially processed Cholesterol and other Sterols.

- Will not oxidize, nor turn rancid.
- Are unaffected by electrolytes.
- Retain their properties at extreme temperatures.
- Are for neutral, acid and alkaline creams, ointments and lotions.

American Cholesterol Products
Incorporated
MILLTOWN, NEW JERSEY
Sales Office—58 West 40th Street—New York 18, N. Y.

R.W. Greeff & Co. Inc. RWG New York, U.S.A.
INDUSTRIAL AND PHARMACEUTICAL *Chemicals*

ASEPTOFORM

Para Hydroxy Benzoates
(Methyl, Butyl and Propyl)

Effective preservatives for creams and lotions

R.W. GREEFF & CO.
10 ROCKEFELLER PLAZA NEW YORK CITY
TRIBUNE TOWER CHICAGO, ILL.

Mercury firmer

Although there is some mercury available on spot the supply is not as large as it was a month ago. The situation generally displays a stronger tone with some talk on the Coast of a further upward movement in prices. Holders are generally asking $105 to $106 per flask for metal, but they do not appear to be very anxious sellers.

Stocks in producers' hands at the end of June amounted to 5,757 flasks, a decline of 414 flasks from the quantity on hand at the end of May. Consumers' and dealers' stocks were slightly larger, rising from 8,900 flasks in May to 9,000 flasks at the end of June.

Mercurials are reported moving into consuming channels at a reasonably good rate. Good stocks continue to hang over the market, but with the metal displaying an upward trend, it is not likely there will be any sharp break in derivative prices.

Shark Fishing

Shark fishing off the coast of Sao Luiz, Maranhao, Brazil, is at present being investigated by United States interests. Sharks of numerous varieties are known to exist in abundance in Sao Marcos Bay, northwest of the islands of Sao Luiz, and to range within 1,000 miles of that location. Although previous tests have indicated a low vitamin-A content, the eventual plan is to process shark-liver oil, among a large variety of products.

Brazilian emetine

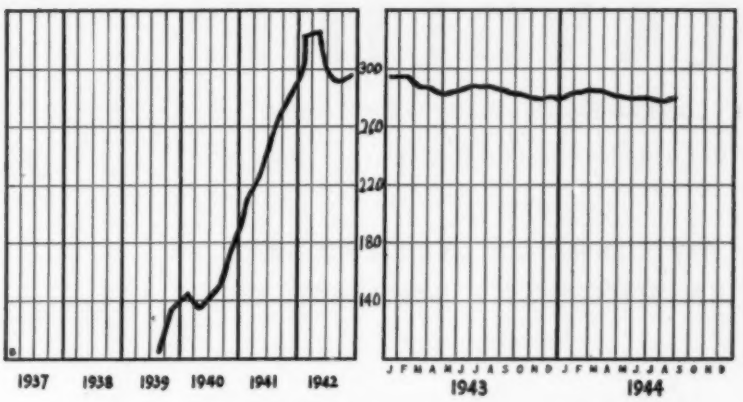
Sufficient amounts of emetine are being produced in Brazil for some to be exported, reports the foreign press. Approximately 200 kilograms are said to have been exported to the United States.

Lanoline firm

The recent confused position in lanoline has been due largely to the matter of distribution rather than to any tremendous increase in production. Backing up of supplies in some directions has been noted, but, on the other hand, certain consumers who have been in urgent need of goods have been unable to get deliveries.

Lanoline is under complete allocation and basically the situation is regarded as extremely firm. It is quite likely adjustments in the allocation system will tend to correct conditions, it was said.

15 Botanicals—Weighted Price Index. 1926=100.



The botanicals index advanced to 277.5 from the previous 276.2. Senna was up to 12 cents a pound.

Menthol scarce

Although it is believed that a little more than half of last year's production of menthol in Brazil has been shipped at contract prices which were well above OPA ceilings, there is still considerable quantities to come forward. In some instances difficulty has been encountered in obtaining shipping space because it is necessary to place the material under cover where it will be protected from the heat. Such space, it is said, is being allocated to more important commodities.

Reports from Brazil indicate that some houses are anxious to sell new crop menthol for January-April shipment. Since these goods would not arrive in this market until late spring no one seems willing to purchase that far ahead. It is quite possible the war in Europe will be over by that time. Moreover, some trade factors believe that the coming crop will be considerably larger in Brazil and that they will be able to obtain material at much lower prices by next year. It is understood that a few single pound lots are changing hands on spot.

Alcohol tight

Pharmaceutical manufacturers are still anxiously awaiting the release of more alcohol so that they might resume or increase production of certain tinctures and fluid extracts. As far as can be learned, however, there does not appear to be any possibilities of allocations being increased.

Iodine more ample

Supplies of iodine, both from import and domestic sources are now ample enough to permit WPB to place the materials in a category of being available as a substitute for scarcer supplies wherever necessary. It is learned from the Chilean Nitrate Sales Corp. that throughout the present war stocks of Chilean crude iodine in the United States have been ample for military and civilian needs. Stocks in this country are well in excess of 1,000,000 pounds.

More interest is shown in citric acid with major producers urging consumers to place their orders by September 1 for delivery over the final quarter. Prices on cod liver oil remain steady. More sodium benzoate is moving into consuming channels. The Bureau of the Census reported May production of acetylsalicylic acid at 819,287 pounds, and stocks of 960,934 pounds at the month-end. Both were above April figures.

The Bureau of the Census data shows May production of ethyl acetate at 8,213,741 pounds. Stocks at the end of the month totaled 5,397,266 pounds. Both production and stocks gained over April returns. Phenobarbital figures for May show production of 24,683 pounds and a month-end supply of 51,342 pounds. Production was more in April but stocks were less.

BOTANICALS

With the end of the war in Europe authoritatively reported to be in sight, the prospects for increased supplies of many botanical drugs became more favorable. Domestic production is still hampered by labor conditions and, although dealers have offered favorable

LANOLIKE

a superior replacement for Lanolin in Cosmetic and Pharmaceutical Products

NO CHANGE NECESSARY IN PRODUCT FORMULAE

Lanolike will replace Lanolin in most creams and ointments with neither variation in formulae nor adjustment of manufacturing procedure.

LITERATURE AND SAMPLES ON REQUEST

JOHN T. LLOYD
(SOLE DISTRIBUTOR)
412 CENTRAL AVE. CINCINNATI 2, OHIO

BLL

Powdered Extract of
BELLADONNA LEAF, U.S.P.

•

Powdered Extract of
HYOCYAMUS LEAF, U.S.P.

•

For spot or future delivery

Now available at reduced prices

B. L. LEMKE & CO.
MANUFACTURING CHEMISTS
250 WEST BROADWAY • NEW YORK 13, N. Y.

Laboratory Buildings, R. T. Vanderbilt Co., E. Norwalk, Conn.

VEEGUM

MAGNESIUM ALUMINUM SILICATE GEL

For

LEG MAKE-UP
TOOTH PASTES
BRUSHLESS CREAM
LATHER CREAM
HAND CREAMS
LOTIONS
EMULSIONS

PROTECTS FLAVORS PROTECTS PERFUMES
STABILIZES EMULSIONS

Samples Upon Request

Specialties Department
R. T. VANDERBILT CO., Inc.
230 Park Avenue New York 17, N. Y.

Fine Chemicals

BPC

PHARMACEUTICAL CHEMICALS

AMINOACETIC ACID
AMINOPHYLLINE
BENZOCAINE
CHINIOFON (YATREN)
CHLORBUTANOL
CINCHOPHEN
8-HYDROXYQUINOLIN
IODOXYQUINOLIN SULPHONIC ACID
NEO CINCHOPHEN
OXYQUINOLIN BENZOATE
OXYQUINOLIN SULPHATE
POTASSIUM OXYQUINOLIN SULPHATE
PHENOBARBITAL
PHENOBARBITAL CALCIUM
PHENOBARBITAL SODIUM
SULPHANILAMIDE
TETRA-IODO-PHENOLPHTHALEIN SODIUM
THEOPHYLLINE

INTERMEDIATES

BENZYL CYANIDE
CYANO ACETIC ACID
DIETHYL MALONATE
ETHYL CYANOACETATE
8-HYDROXYQUINOLIN-5-SULPHONIC ACID

AROMATIC and FLAVORING CHEMICALS

DIACETYL

BENZOL PRODUCTS CO.
237 SOUTH STREET NEWARK, N. J.

inducements, collections have not materially improved.

Spot stocks of most botanicals are very low. Since this is not a heavy buying season the effect of the supply position is not so noticeable as it will be later in the year. As a matter of fact, the current market is dull from a demand standpoint. However, orders for future delivery are reported and it is on this business that dealers are placing their forward plans.

Local botanical drug dealers have vivid recollections of the headache large stocks of high cost merchandise can cause once the element of war is removed as a price support. Therefore, the general intention of dealers at this time is to avoid large stocks even though by some miracle such stocks might be obtained. Their tendency is to buy high priced goods heavily only on definite commissions by manufacturing consumers. If consumers want to be assured of their requirements it might be wise to come to an agreement with their dealer as to the prices to be paid and authorize their dealer to purchase for their account.

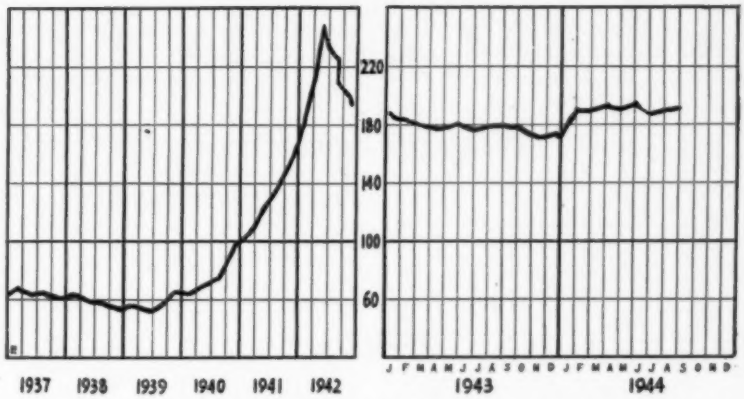
During the current trading period there was more interest displayed in the condimental group of botanicals. It was learned that there is a movement afoot which seeks higher price ceilings on a number of such items such as coriander, cumin, dill, fennel, fenugreek, blue and white poppy, turmeric root, and sesame seed.

Arabic Supply

Although there is sufficient gum arabic here to meet consumers' requirements for over a year, and additional quantities are believed to be nearby, there has been a decided decline in receipts in the Sudan because of rains. Receipts from the interior, which at times amount to as much as 80 or more tons a day, have fallen to four or five tons. With the rainy season only starting, it is not expected there will be any increase in receipts at the primary center until late December.

It is extremely difficult for local houses to make any predictions concerning the future trend of arabic prices, especially in the face of the large quantities available in this market, but a good portion of the gum here is reported to have cost over 11c a pound, and it does not appear reasonable to expect that current spot prices ranging from 11½c to 12c per pound will go any lower.

15 Essential Oils—Weighted Price Index. 1926=100.



The essential oils index advanced to 174.9 from the previous 174.6. This was caused by a rise in Bois de Rose oil to $5.00 a pound.

Drug houses see no reason for the more cautious attitude displayed on the part of buyers in making purchases. It is generally feared that it will be several years after the war before anything like a normal flow of imported gums will be possible.

U. S. Agar Industry

A shortage of divers and processing equipment is hampering America's new seaweed industry, developed to provide agar, according to a report from the Fish and Wildlife Service of the Department of the Interior.

Recent surveys by the service have revealed that Pacific Coast beds of Gelidium seaweed, which produce the best quality of agar, are more than sufficient to supply all that can be harvested within the next few years with present facilities.

While the gum from Gelidium is the only substance that meets the exacting requirements of bacteriologists as a culture medium, it has been found that a different seaweed known as Gracilaria yields a gum that can be used satisfactorily in most industrial processes that formerly utilized agar. The Gracilaria can be produced at a much cheaper cost.

The Service also revealed that the cost of harvesting and processing agar in American factories is considerably higher than we formerly paid for agar in Japan, although methods of extraction are now being studied to reduce the price from $2.25 a pound to around $1.50 a pound, which was formerly paid.

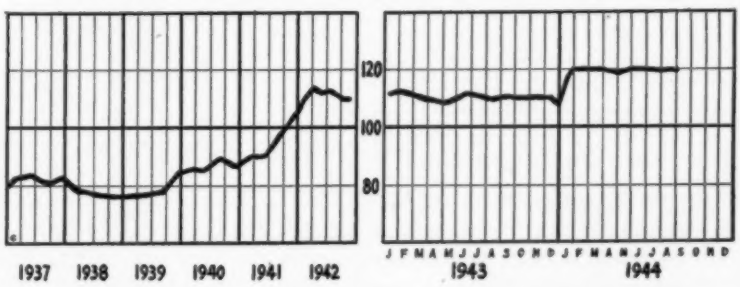
Wax restrictions lifted

Since the lifting of import restrictions on beeswax and carnauba wax, the supply of both materials has been sufficient for all military and civilian needs, the Chemicals Bureau of the War Production Board now reports.

There is a possibility that beeswax may soon be obtained from India and Turkey, WPB says. Present sources of supply of beeswax are South America and Africa, while carnauba wax is imported exclusively from Brazil.

More shipping space has been made available from South America for the import of these waxes during the last few months.

25 Cosmetic Raw Materials—Unweighted Price Index. 1926=100.



The cosmetic raw materials index remained without change at 113.1.

LAUTIER FILS

Natural and Aromatic Raw Materials
Essential Oils
for

Perfumery •

Cosmetics •

Soap •

Lautier Fils

INCORPORATED

154-158 WEST 18th STREET NEW YORK 11, N. Y.

Grasse Paris London Beyrouth

MANUFACTURERS OF QUALITY RAW MATERIALS FOR PERFUMERY FOR OVER 100 YEARS

SUB-ROSA

Leading labels in the cosmetic field enjoy the enthusiastic endorsement of discriminating American women.

The fact that we are the source of supply to these successful purveyors gives us a sub-rosa sense of satisfaction quite as gratifying as though their famous brands were our own.

Why not write NOW (on your business letterhead) for sample Kelton Lipstick, Rouge, Powder, Eye Shadow? There is no obligation to do more than test them. They have stood the test for years.

•

KELTON

Cosmetic Company

230 West 17th Street New York 11, N. Y.

819 Santee Street Los Angeles 14, Calif.

• Lipstick • Eye Shadow • Rouge • Mascara • Powder •

Take This Tip:

you can't go wrong, if you order your raw materials from "Drury in Chicago"

A.C. DRURY & CO., Inc., CHICAGO, ILL.

GUMS
(CRUDE, POWDERED)
Chemicals and Oils

GUMS:
GUM ARABIC
GUM ARABIC BLEACHED
GUM GHATTI
GUM KARAYA (Indian)
GUM TRAGACANTH
GUM EGYPTIAN
GUM LOCUST (Carob Flour)
QUINCE SEED
★
CASEIN

SPECIALTIES:
MENTHOL (Crystals)
PEPPERMINT OIL
TARTARIC ACID
CREAM OF TARTAR
GLUCOSE (U.S.P.)
COUMARIN
★
EGG ALBUMEN
EGG YOLK
BLOOD ALBUMEN
JAPAN WAX
CANDELILLA WAX

REPRESENTATIVES:
CHICAGO:
CLARENCE MORGAN, INC.
BOSTON:
P. A. HOUGHTON, INC.
PHILADELPHIA:
R. PELTZ & CO.
ST. LOUIS:
H. A. BAUMSTARK & CO.

PAUL A. DUNKEL & CO., *Inc.*
IMPORTERS AND EXPORTERS
1 WALL STREET, NEW YORK,
Hanover 2-3750
CHICAGO: 919 N. MICHIGAN AVE., TEL. SUP. 2462

CHEMICAL **KESSCO PRODUCTS** SPECIALTIES

PROPYLENE GLYCOL MONO STEARATE
PURE and SELF-EMULSIFYING GRADES
For use in
« COSMETICS » « PHARMACEUTICALS »
« FOODS »
• UNIFORM QUALITY •
• DEFINITE SPECIFICATIONS •
• HIGHEST PURITY •
OTHER PROPYLENE GLYCOL ESTERS ARE ALSO AVAILABLE
For Samples, Specifications etc., WRITE TO
KESSLER CHEMICAL CO., Inc.
STATE RD. and COTTMAN AVE. ESTABLISHED 1921 PHILADELPHIA 35, PA.

NO SUBSTITUTES NECESSARY!
The best is still available—
HOPKINS' EGYPTIAN HENNA

Not once since the start of the war have we let hairdressers run short of the best Henna in the world — HOPKINS' EGYPTIAN HENNA. You need no substitutes—in fact, there is no substitute for HOPKINS' EGYPTIAN HENNA. Without guesswork, without predisposition tests, HOPKINS' EGYPTIAN HENNA gives you always the uniform, even shade your patron wants. Contains no chemicals or dyes of any kind. Order from any reputable wholesaler

There is no shortage of HOPKINS' EGYPTIAN HENNA
If you have any difficulty in supplying your regular needs of HOPKINS' EGYPTIAN HENNA, please let us know promptly. We will put you in touch with a reputable distributor in your locality.

J. L. HOPKINS & CO.
220 BROADWAY : : : NEW YORK

GERANIOL, Abs. & Soap
ALPHA AMYL Cinnamic Ald.
CITRAL C. P.
CINNAMIC ALDEHYDE
PEACH ALDEHYDE
LINALOOL
BERGAMOT, Imit. Extra
YLANG YLANG, Imit. Extra

Samples and quotations on request

GUNNING

GUNNING AND GUNNING
601 WEST 26th ST., NEW YORK 1, N. Y.
AROMATIC CHEMICALS MANUFACTURING DIVISION

Proflavine

(*Continued from page 283*)

conclusion that the former was still the superior agent.

Although Hawking[27] feels that, on the basis of his own experiments on mice, proflavine powder application is not to be recommended for fresh wounds, others have confirmed the battle-gained value of this antiseptic. Selbie and McIntosh,[28] for example, report that from the view of toxicity, there is no reason why proflavine should not be used on fresh wounds, either as a solution or as a diluted powder.

According to Browning,[8] the flavines are preeminently useful as first-aid treatments; proflavine permitting the transportation of injured men without the need for redressing the wounds. Usually after 4 to 7 days of treatment, when flavines have fulfilled their function of controlling or preventing infection, a yellowish, fibrinous membrane appears which retards granulation, so that it may be advantageous to change to other treatment later.

A most important indication for proflavine appears to be in the treatment of injuries to the skull and brain. Thus, Russell and Falconer[11] have shown that a 1:1,000 solution of proflavine and 2:7 diaminoacridine (diflavine) in isotonic saline buffered at a pH of 6.2 were harmless when applied to rabbits' exposed brain, while acriflavine 1:1,000 and euflavine 1:2,000 caused hemorrhage and necrosis. Other standard antiseptics tested at the same time also proved unsuitable for use on brain tissue. A more recent report[29] reveals that while dilute proflavine solutions such as the above may be used effectively, the drug is highly destructive to brain tissue when applied as a powder.

Proflavine preparations are also finding use in the treatment of burns. In England, Heggie and his associates[30] prepared buffered, isotonic proflavine emulsions of water-in-oil and oil-in-water types for this purpose. After removal of gross infection by treatment with saturated aqueous sodium sulfate acting as a lymphogogue, the proflavine emulsions are useful as occlusive emollient dressings for superficial granulating areas, particularly for infected, second degree burns.

In the recently revised Memorandum on the treatment of burns, issued by the Department of Health for Scotland,[31] it was pointed out that when dyes are employed, proflavine is the least poisonous and is probably always safe when used in 0.1 per cent strength. In listing triple dye compounds for burn therapy, the Memorandum suggested the use of a preparation made from equal parts of aqueous solutions containing:

Crystal violet	**0.5 per cent**
Brilliant green	**0.1 " "**
Proflavine or euflavine	**0.1 " "**

Acridine antiseptics have had some use in the treatment of various dermatological conditions such as eczema and furunculosis. For treating impetigo infections which spread rapidly over the face with little crusting, Roxburgh[32] last year recommended the use of a 1:1,000 proflavine solution.

In addition to the simple buffered solutions and the combinations already mentioned, proflavine is used in quite a variety of preparations intended to facilitate its use or effectiveness. For example, for the treatment of small wounds, proflavine may be used as a 1 per cent ointment.[21] In their paper of 1939, Albert and Bennett[33] presented several interesting proflavine formulas. Among them was an alcoholic solution of proflavine base. Said to be useful as a first-aid application for minor injuries and also for preparing the skin of patients before operation, it consists of:

Proflavine base	**0.1 part**
Alcohol (70%), to make	**100.0 parts**

Also included in this series of formulas was a method for making a soluble ointment of proflavine sulfate, for which they suggested the synonym, Glycanth of Proflavine Sulfate, made as follows:

Proflavine sulfate	**0.1 Gm.**
Starch	**1.5 Gm.**
Tragacanth	**1.5 Gm.**
Glycerine	**50.0 cc.**
Water, to make	**100.0 Gm.**

The starch and the water are rubbed to a smooth consistency and boiled. The tragacanth, proflavine and glycerine are triturated in a mortar, the starch jelly incorporated and the product adjusted to weight with the water used in rinsing the mortar.

By adding 8 parts of tannic acid to this soluble base to make a total of 100 parts, a product is obtained that is very similar to one found very effective in treating burns.

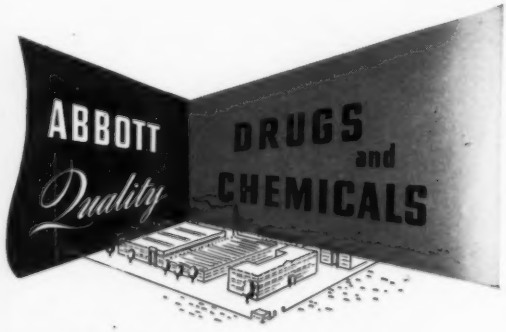
In attempting to make an oily lotion or emulsion of proflavine sulfate, Albert and Bennett found that acacia, tragacanth, glyceryl monostearate and soaps were unsuitable for the purpose. However, they found that a satisfactory emulsion could be prepared through the use of methyl cellulose (S. 400 viscosity), by the following procedure:

Proflavine sulfate	**0.10 part**
Methyl cellulose	**0.75 part**
Liquid petrolatum	**65.00 parts**
Distilled water, to make	**100.00 parts**

The methyl cellulose is brought to a boil with 20 parts of water and as the solution cools the cellulose starts to dissolve. To the mucilage so formed, add the petrolatum in small portions; triturating between additions. The emulsion may be thinned with a few drops of water if required from time to time. When all the oil is added the emulsion may be triturated with the proflavine sulfate before adjusting to volume. Alternatively, the proflavine may be dissolved in 30 parts of water used in making the mucilage and emulsion. The final product is a bright yellow and is pourable.

Browning,[8] in his review on proflavine, mentioned that oily preparations of proflavine oleate have been used and proved valuable for dressing large raw surfaces, as for example, on septic sites preparatory to radium therapy. In the treatment of open wounds, an ointment has been used which contains 1 per cent of

REPLACEMENTS
For
AROMATIC CHEMICALS
ESSENTIAL SPICE
and
FLOWER OILS
•
SOAP PERFUMES
ODOR MASKS
SEELEY & CO.
136 LIBERTY STREET NEW YORK 6, N.Y.
FACTORIES
FARMINGDALE, L. I., N. Y. | NYACK, N. Y.



ANESTHETICS
Procaine Hydrochloride...Procaine Base...Benzocaine...
Procaine Borate...Butyl p-aminobenzoate

ANTISEPTICS
Acriflavine Hydrochloride...Acriflavine Neutral...
Proflavine Sulfate

HYPNOTICS
Phenobarbital...Phenobarbital Sodium

ALKALOIDS AND DRUG EXTRACTIVES
Ephedrine...Lobeline Sulfate...Podophyllin

For Quotations Address:
CHEMICAL SALES DEPARTMENT

ABBOTT LABORATORIES
NORTH CHICAGO · ILLINOIS

proflavine oleate (prepared from proflavine base) in a base consisting of equal parts of petrolatum and calcium carbonate. A thick layer of this proflavine oleate ointment may be spread on gauze and applied to the surface of the cleaned wound, or the ointment may be applied directly to the wound. The chief advantage of this preparation is that the primary dressing need not be changed for several days.[13]

Of interest in this connection is a proflavine liquid soap described by Albert and Bennett.[33] The formation of proflavine oleate is an integral part of the procedure:

Proflavine base	**0.5 Gm.**
Oleic acid	**17.7 Gm.**
Potassium hydroxide	**3.8 Gm.**
Ether	**5.0 cc.**
Distilled water, to make	**100.0 Gm.**

Mix the proflavine base with 0.7 Gm. of the oleic acid, dissolved in the ether. Evaporate the ether and triturate the product with the liquid soap produced as follows:—Dissolve the potassium hydroxide in 80 cc. of the water, pour into the remainder of the oleic acid (both solutions being at 100° C.), shake gently until dissolved, cool and adjust with further oleic acid or potassium hydroxide until a few drops give, with phenolphthalein as the indicator, a faint pink color vanishing on the addition of alcohol. When the proflavine oleate is dissolved, adjust to volume.

These workers note that this liquid soap, by its abundant lather with water and its staining qualities, provides a means of simultaneously cleansing the unbroken skin and depositing the dye upon it. If necessary, the stain is readily removed with soap and water. Their attempts to make a similar soap by the double decomposition of potassium oleate and proflavine sulfate were unsuccessful.

Proflavine is also an efficient surface antiseptic for mucous membranes, and like the other acridine dyes, is frequently used for this purpose. Although, because of its proved superiorities, proflavine is to be preferred to acriflavine, most authorities[4, 13, 21] give the uses and methods of application in one category for both drugs. For application in infections of the mucous membranes of the nose and throat a 1:1,000 solution may be used. The same solution may also be used to treat gingivitis. In suppurative infections of the middle ear and mastoid, a 1:500 solution in 50 per cent alcohol may be employed as drops or the cavity may be packed with gauze wet with the solution.

The acridine dyes have been used as urinary antiseptics but are being replaced by more efficient products such as mandelic acid and its derivatives and by the sulfonamides.[34] The sulfas may also replace the acridines in the treatment of gonorrhea. When indicated in the therapy of this disease, the flavines are used as a 1:1,000 solution for injection into the urethra, but if large quantities are required for irrigating purposes, a 1:4,000 solution is preferable. However, more dilute solutions of 1:6,000 to 1:10,000 have been used.

A few years ago, when plasma and serum were be-

ginning to loom as major therapeutic weapons, MacKay[35] made a quite thorough comparison of the bacteriostatic action of various disinfectants for use in these vital materials. Proflaving proved to be the most effective agent for disinfecting human serum and citrated plasma. In concentrations of 1:100,000 it prevented the growth of *staphylococcus aureus* and *Bacillus subtilis* for six days and of enterococci for three days. However, a 1:10,000 dilution had no effect on pseudomonas or mold. She felt that higher concentrations of proflavine were prohibited by the danger of toxic reactions.

Truly indicative of the growing importance of proflavine and related acridine dye antiseptics are the various compounds proposed as improvements over proflavine sulfate.[36, 37] Proflavine dihydrochloride, for example, has been suggested as useful on the basis of its greater solubility as compared with the sulfate. However, all of these newer compounds must await fuller evaluation before they can receive general acceptance. One such, diflavine, mentioned above, has not proved superior to proflavine under conditions of actual use.

BIBLIOGRAPHY

1. Editorial: Brit. M. J. 1:355, 1943.
2. Editorial: J.A.M.A. 122:117, 1943.
3. Anon: Am. Prof. Pharm. 9:577, 648 & 721, 1943.
4. Goodman, L. & Gilman, A.: "Pharmacological Basis of Therapeutics," New York, Macmillan, 1941, pp. 863-5.
5. Browning, C. H.: J. Path. Bact. 16:144, 1913.
6. Browning, C. H. et al: Brit. M. J. 2:70, 1917; ibid. 2:695, 1921.
7. Browning, C. H. et al.: Proc. Royal Soc. B90: 136, 1919, ibid. B93: 329, 1922.
8. Browning, C. H.: Brit. M. J. 1:341, 1943.
9. Albert, A. et al: Quart J. Pharm. & Pharmacol. 10:649, 1937.
10. Albert, A. et al: Brit. J. Exper. Path. 19:49, 1938.
11. Russell, D. & Falconer, M. A.: Brit. J. Surg. 28:472, 1941.
12. Berry, H.: Pharm. J. 146:181, 1941.
13. Council on Pharmacy & Chemistry: "New & Nonofficial Remedies," Chicago, Amer. Med. Assoc., 1943, pp. 119-113.
14. German Pat. 347, 819, 1921.
15. Albert, A.: J. Chem. Soc. 1941, p. 121.
16. Albert, A.: Pharm. J. 150:118, 1943.
17. Hawkins, F.: Brit. M. J. 1:263, 1941.
18. McIntosh, J. & Selbie, F. R.: Lancet 1:750, 1942.
19. McIntosh, J. & Selbie, F. R.: Lancet 1:793, 1943.
20. Brownlee, G. & Tonkin, I. M.: Quart. J. Pharm. & Pharmacol. 16:73, 1943.
21. Sollmann, T.: "A Manual of Pharmacology," Ed. 6, Philadelphia, Saunders, 1942, pp. 678-9.
22. Beath, T.: J.A.M.A. 122:695, 1943.
23. Albert, A. & Gledhill, W.: Australasian J. Pharm. 24:388, 1943, Pharm. J. 151:87, 1943.
24. Editorial: Pharm. J. 152:55, 1944.
25. Mitchell, G. A. G. & Buttle, G. A. H.: Lancet 2:416, 1942.
26. Mitchell, G. A. G. & Buttle, G. A. H.: Lancet 2:287, 1943.
27. Hawking, F.: Lancet 2:710, 1943.
28. Selbie, F. R. & McIntosh, J.: J. Path. Bact. 55:477, 1943.
29. Russell, D. S. & Falconer, M. A.: Lancet 1:580, 1943.
30. Heggie, R. M., Gerrard, E. A. & Heggie, J. F.: Lancet 1:347, 1942.
31. Dept. Health for Scotland: (through) Pharm. J. 152:92, 1944.
32. Roxburgh, A. C.: Med. Press & Circ. 210:358, 1943.
33. Albert, A. & Bennett, C.: Australasian J. Pharm. 20:175, 1939.
34. Lesser, M. A.: Drug & Cosmetic Ind. 41:201, 1937.
35. MacKay, M. E.: Brit. M. J. 1:747, 1941.
36. Linnell, W. H.: Pharm. J. 150:102, 1943.
37. Albert, A. & Gledhill, W.: Pharm. J. 151:87, 1943.

On Solid Ground

(*Continued from page 285*)

so why should the doctors seek to economize in the selection of medicines?

It is our firm belief that the drug manufacturing industry should be proud of its position at the present time. It should be pleased with the progress that it made in recent years, and it should seek out all methods of further improving its position in the eyes of the public. There is no need for the industry to be intimidated by the threats which are hanging over the medical profession, for if the medical profession had been as forward-looking as the drug manufacturing has been, socialized medicine would never be contemplated.

Tombarel

ESSENTIAL OILS
AROMATIC CHEMICALS
PERFUME BASES

for
PERFUMES
COSMETICS
AND SOAPS

Special Perfume Creations that answer the call for something "individually yours."

TOMBAREL PRODUCTS
CORPORATION
L. J. Zollinger, President
12 East 22nd Street New York 10, N. Y.

QUALITY RAW MATERIALS

Our complete stocks guarantee that you can obtain the exact grade and quality for your requirements without delay.

BEESWAX, sunbleached and yellow
Refined U.S.P.

TRAGACANTH GUM, all grades

KARAYA GUM, all grades

STEARIC ACID, fancy triple pressed

QUINCE SEED, Persian, recleaned

also

SPERMACETI WAX CERESIN WAX
CAMPHOR

and all other cosmetic raw materials. Samples on request.

Write for latest stock list

WALTER H. JELLY & CO.
INCORPORATED
412 N. Western Avenue Chicago, Illinois

MYSORE GOVERNMENT
Sandalwood
~~ Oil ~~

Distilled from
Santalum Album

{ INSIST ON ORIGINAL CANS AND CASES }

Sole Agents for the United States
In Canada: *Sole Agents*
W. J. BUSH & CO. (*Canada*) Ltd. Montreal

W. J. BUSH & CO.
(Incorporated)
Essential Oils
New York

Chicago National City, Calif. Montreal

Brushless Shaving Creams

(*Continued from page 281*)

shaving cream by this formula is first to break the stearic acid into pieces and melt it together with the coconut oil by indirect heat in a separate kettle.

The boric acid is dissolved in about a gallon of water, heated to near the boiling point. When the solution is clear, the glycerine is added.

The rest of the water and the caustic potash lye are poured into the mixing kettle and heated to 140 degrees to 150 degrees F. The hot boric acid solution is poured in on top of the water and the temperature is maintained at around 150 degrees.

The stearic acid-coconut oil mixture is now run into the kettle on top of the water-lye-glycerine solution through a strainer with the agitator running. After all of the stearic acid is added, the agitation continues until the mass is smooth. At this point a sample is drawn, cooled and titrated for free fatty acid content. The cream when it is of proper consistency should contain from 3 to 5% F.F.A.

Continue the stirring for several hours or a better procedure is to turn the cold water into the jacket of the cream mixing kettle and stir over night until the cream is cold. Then the perfume is added and stirring is continued to distribute it properly. When the cream is completely cold it should be examined for consistency, after which it may be filled into jars or tubes as desired.

A brushless shaving cream made with lanolin has the following composition:—

25 lbs. Stearic Acid (Triple Pressed)
3 lbs. Lanolin Anhydrous
2 lbs. Alcohol (S.D. 3A)
¾ lbs. Triethanolamine
½ lb. Borax
3 lbs. Glycerine
70 Lbs. Water (Distilled or Softened)
4 oz. Perfume

The *modus operandi* for this formula is first to melt the stearic acid and lanolin by indirect heat in the melting kettle. Pour the water into the mixing kettle and when heated dissolve the borax in a portion thereof. Add the borax solution and the triethanolamine to the hot water in the mixer. This has been heated to about 150 degrees F.

With the agitator running pour the stearic acid-lanolin mixture slowly into the mixing kettle; stir until smooth and the white emulsion has formed. Continue the stirring until the mass cools, then add the glycerine, alcohol and perfume.

Another brushless shaving cream made with triethanolamine is formulated as follows:—

I

240 lbs. Stearic Acid (Triple Pressed)
80 lbs. Beeswax
40 lbs. Mineral Oil

Melt these ingredients in a separate kettle at about 160 degrees F.

II

15 lbs. Triethanolamine
1210 lbs. Water (Distilled or Softened)
8 lbs. Borax

4 lbs. Sulfonated Castor Oil
48 lbs. Glycerine

Pour these together in the mixing kettle and heat to 150 degrees F., being sure that the borax is all dissolved by agitating the liquid well.

With the agitator running, pour the stearic acid mixture into the liquid in the mixer in a slow steady stream. Agitate for several hours until the mass is perfectly smooth. Withdraw a sample, cool and examine for consistency. A pH reading at this point should show the cream to be acid, running between 6.6 and 6.8. This pH may be adjusted by small additions of mineral acid if required or more triethanolamine if too acid.

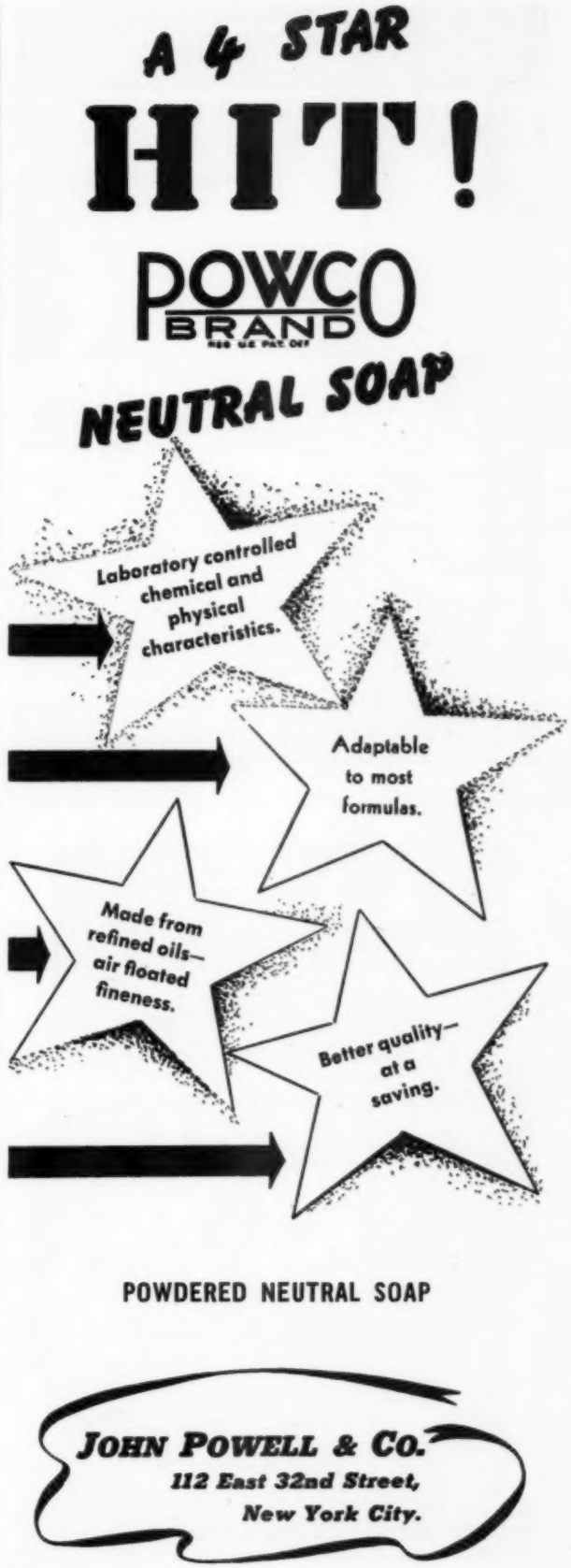
When the cream is of the proper consistency, turn the cold water into the jacket and agitate over night. In the morning add about 5 pounds of suitable perfume and continue mixing until the perfume is uniformly distributed.

It is advisable in making up this formula that a close check of all weights be made. If the cream is too stiff after making the pH adjustment, small quantities of hot water may be added in the mixer to thin to the proper consistency.

Brushless shaving creams are apt to undergo changes as they age. As has already been indicated, atmospheric conditions, especially extreme heat and extreme cold contribute greatly to these variations. For these reasons it is advisable to take samples of the filled tubes from each batch. These should be kept under extreme heat and extreme cold in the laboratory for a period of weeks and then checked for consistency at room temperature. While the creams hold up more satisfactorily on the acid side, it frequently happens that certain peculiarities in raw materials may cause a difference in the cream as it ages. Constant, careful investigation is necessary to produce a completely satisfactory product.

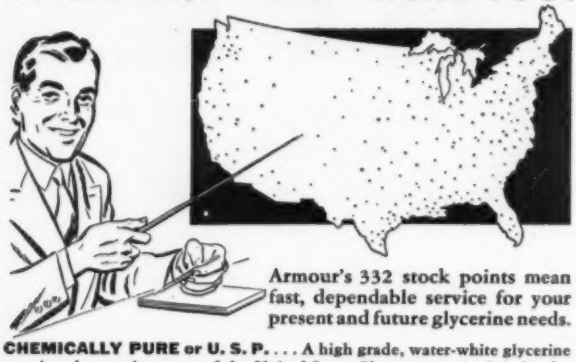
While the formulae referred to above are merely types, it is possible to alter them in many directions. This may be done, for example, by using olive oil instead of coconut oil, tegin instead of lanolin, other amines, like amino methyl propanol, instead of triethanolamine, solulized mineral oil instead of the regular cold cream type of mineral oil. Then too, a wetting agent may be added to increase the spreading power of the cream on the face, and possibly its rinsing qualities. Or certain germicidal substances may be added to give disinfectant qualities, or again water may be partly replaced by witch hazel. These are just a few of the many suggestions as to giving these creams distinctive properties and characteristics. These additions and variations may affect the consistency of the cream very materially. For this reason any samples which are made up should be carefully studied in the laboratory before going into actual production.

The popularity of brushless shaving creams, or no-lather shaving creams is still increasing. For that reason they deserve close attention and study by those interested in producing shaving products.



GLYCERINE

QUICKLY AVAILABLE AT A STOCK POINT NEAR YOU!



Armour's 332 stock points mean fast, dependable service for your present and future glycerine needs.

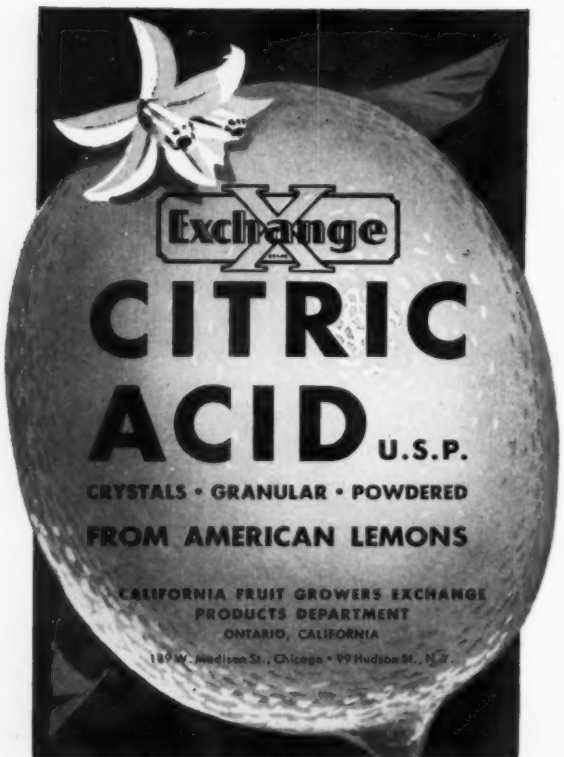
CHEMICALLY PURE or U. S. P. . . . A high grade, water-white glycerine meeting the requirements of the United States Pharmacopoeia. Suitable for use in foods, pharmaceuticals, cosmetics or for any purpose where the highest quality is demanded. It has a specific gravity of 1.249— 25°C./25°C.

HIGH GRAVITY . . . A pale yellow glycerine for industrial purposes with a specific gravity of 1.262— 15.5°C./15.5°C.

DYNAMITE . . . A yellow glycerine made especially for the explosives trade. It has a specific gravity of 1.262— 15.5°C./15.5°C.

YELLOW DISTILLED . . . A yellow glycerine for industrial purposes with a specific gravity of 1.259— 15.5°C./15.5°C.

ARMOUR AND COMPANY
1355 WEST 31ST STREET · CHICAGO 9, ILLINOIS



Copyright 1942 California Fruit Growers Exchange, Products Dept.

Sulfadiazine

(*Continued from page 289*)

the initial adult dose is 0.05 Gm. per kilogram of body weight, followed by 1/3 of the initial dose given every four hours day and night until the temperature has been normal for three to five days.

In severe *streptococcic*, *staphylococcic*, *meningococcic*, or *Friedländer's bacillus* infections, during the febrile period blood concentration of the drug should be maintained at approximately 15 mg. per 100 cc.; in *mild* or *moderately severe streptococcic* infections, 5 to 10 mg. per 100 cc. Blood levels below 4 mg. per 100 cc. are probably inadequate and levels above 20 mg. per 100 cc. are rarely warranted.

Serious intoxication with sulfadiazine is not usually encountered. Where toxic manifestations do occur, they are similar to, but fewer than, those noted for sulfanilamide, sulfapyridine, or sulfathiazole. Surveys have shown that 6% to 8% of all patients who received sulfadiazine had toxic manifestations as compared to 15% of those who received sulfathiazole. Therefore, patients receiving sulfadiazine should be observed with care, the same as in the case of other anti-pneumococcal sulfonamides.

It has been shown that alkaline urine dissolves high concentrations of sulfadiazine and acetyl sulfadiazine. Therefore, renal complications may be prevented by the administration of sufficient alkali (i.e., sodium bicarbonate or sodium citrate) and fluids when sulfadiazine therapy is employed. This is not the case with sulfathiazole, because the solubility of sulfathiazole and acetyl sulfathiazole is not as high in alkaline urine.

When any serious toxic symptoms occur, sulfadiazine therapy should be stopped and fluids forced in order that the drug may be eliminated from the body as rapidly as possible.

The most widely employed method of oral administration of sulfadiazine is in the form of *compressed tablets*, the most popular dosage form being 7.7 gr. (0.5 Gm.) tablets. The tablets may be prepared with a "groove" in the center of one or both sides so that convenient half-dosage may be employed as indicated.

The usual procedure for the manufacture of compressed tablets is employed in the preparation of sulfadiazine tablets. The following is a typical formula:

Sulfadiazine Tablets, 7.7 gr. (0.5 Gm.)	
Quantity:	105,000
Die-size:	7/16"
Sulfadiazine	115 lb. 8 oz.
Sugar, Powdered	3 lb. 7 oz.
Sugar, Granular	2 lb. 15 oz.
Starch	9 lb.
Moistener: Water	
Starch	12 lb.
Talc	10 oz. 4 dr.
Magnesium Stearate	4 oz. 1 dr.

For examples of *ointments*, *emulsions*, *ointment-emulsions*, *jellies*, *creams*, *suspensions*, etc., see the article entitled "Useful Bases for Sulfa Drugs," DRUG AND COSMETIC INDUSTRY, March 1944, page 283.

Post-War Program

(Continued from page 279)

Shortly after the war is over and the shortage of manpower and materials disappears, the plans of the proprietary manufacturers will unfold. Many of these manufacturers have also been heavily engaged in the production of goods for war and they also will try to maintain their businesses as near to the war-time levels as possible. Increased research staffs, increased sales staffs, increased advertising and promotion, and in some instances some detailing of physicians and pharmacists will be the road that they will follow.

Bath Preparations

(Continued from page 287)

or tri sodium phosphate is a good detergent as well as a water softener. Any of these materials may be used, either in conjunction with each other or by themselves. From a practical standpoint, sodium sesquicarbonate seems the best choice, since in conjunction with a bubbling bath the foam hides any precipitate that forms, and certainly the sesquicarbonate would be the choice from an aesthetic standpoint.

In conclusion, the purpose of bath preparations is (a) to scent the tub, (b) to introduce lather or foam into the tub, (c) to soften the water. An attempt has been made to show how these products are made and to show how the properties mentioned may be incorporated into one product. The pitfalls accompanying their manufacture have also been discussed and an attempt made to show what could and what could not be done.

ABSORPTION BASES: One of our clients in New Zealand informs us that they are subscribers to your publication for many years and that we should inquire from you whether you could provide them with information on absorption bases. We know that many of these products are patented. New York.

It is quite true that many of the commercial absorption bases have been patented and many others are held as trade secrets. During recent years bases of high water absorptive powers have been introduced to the drug and cosmetic industry. A good proportion of these are said to contain certain alcoholic components of lanolin combined with petrolatum. Cholesterol has been frequently recommended as a useful adjunctive to petrolatum for increasing its ability to absorb water and for enhancing its value from a therapeutic or cosmetic standpoint. Some years ago it was found that cetyl alcohol when mixed with petrolatum produced an ointment base capable of absorbing sixty to seventy per cent of water.

The subject of absorption bases together with comparative tests of emulsifying ability were reported by J. L. Powers, H. B. Leask and R. S. Warner in the "Journal of The American Pharmaceutical Association" (29:14, 1941). I would suggest that this article be checked as an excellent source of information on the subject of cholesterol absorption bases.

EDW. S. BURKE
J. F. HOLLYWOOD

Representing:

CARUS CHEMICAL CO., INC.

BENZOIC ACID
SODIUM BENZOATE
HYDROQUINONE
MANGANESE CARBONATE
MANGANESE DIOXIDE
MANGANESE SULFATE
POTASSIUM PERMANGANATE
RARER PERMANGANATES

BENZOL PRODUCTS CO.

AMINOACETIC ACID (Glycocoll)
AMINOPHYLLINE
BENZOCAINE
CHINIOFON (Yatren)
CHLORBUTANOL
CINCHOPHEN & SALTS
IODOXYQUINOLIN SULPHONIC ACID
NEO CINCHOPHEN
OXYQUINOLIN BENZOATE
OXYQUINOLIN SULPHATE
POTASSIUM OXYQUINOLIN SULPHATE
PHENOBARBITAL & SALTS
TETRA-IODO-PHENOLPHTHALEIN SODIUM
THEOPHYLLINE
DIACETYL
PHENYL ACETIC ACID
BENZALDEHYDE
BENZYL ALCOHOL
BENZYL CHLORIDE
BENZYL CYANIDE
DIETHYL MALONATE
DIMETHYL UREA
CYANOACETAMIDE
CYANO ACETIC ACID
ETHYL CYANO ACETATE
8—HYDROXYQUINOLIN
8—HYDROXYQUINOLIN—5—SULPHONIC ACID

EDW. S. BURKE
Established 1917
132 FRONT STREET - NEW YORK, N. Y.

S106

HEMA DRUG CO., INC.
Telephone NEwtown 9-2110
66-38 Clinton Avenue Maspeth, New York

HORMONES
Crystallins and Solutions
Arsenicals Bismuth Salts Silver Salts Gold Salts
Camphorsulfonates Salicylates
Fine Chemicals and Pharmaceuticals
Also to order

Genuine Shellac
HAIR LACQUER BASE
FOR MANUFACTURERS
Makes new, FASTER DRYING, non-crystallizing, highest type hair lacquer . . . semi-liquid form . . . needs only alcohol (isopropyl or ethyl), water and perfume. Complete instructions furnished.
FINISHED HAIR LACQUER made from our base, perfumed and filtered, also available.
Samples on request
COLLINS LABORATORIES, Inc.
5003 DELMAR BLVD. - ST. LOUIS, MO.

MENTHOL, U.S.P.
NATURAL

Prompt Delivery New York

DIRECT IMPORT FROM BRAZIL

WAX & ROSIN PRODUCTS
42 Broadway, New York 4, N. Y.
Telephone: WHitehall 4-7365

ALL GRADES OF
REFINED GLYCERINE

U. S. P. B. P.
YELLOW DISTILLED
HIGH GRAVITY
DYNAMITE

REFINERIES LOCATED AT
★ Brooklyn, N. Y.
★ Jeffersonville, Ind.
★ Jersey City, N. J.
★ Berkeley, Calif.
★ Kansas City, Kans.

COLGATE-PALMOLIVE-PEET CO.
GLYCERINE DEPT. • 105 HUDSON STREET
JERSEY CITY 2, NEW JERSEY

For Flowery Perfumes

Linalyl Benzoate
Linalyl Anthranilate
Linalyl Salicylate Linalyl Isobutyrate
Linalyl Methyl Tiglate
Terpenyl Formate Terpenyl Anthranilate

FAIRMOUNT CHEMICAL CO., Inc.
Manufacturers of Flavor and Perfume Chemicals
600 Ferry Street NEWARK, N. J.

We Can Offer
Oil Peppermint Rectified USP
and
Oil Peppermint Crystal White USP
Triple Distilled

COMPAGNIE DUVAL
121-123 East 24th St., New York 10
Division of
S. B. PENICK & COMPANY

READERS'

ANTISEPTICS FOR HAIR PREPARATIONS: Would you give me information on a water-soluble antiseptic to be used in a coconut oil shampoo and an antiseptic soluble in oil to be used in liquid petrolatum preparations for the hair? Dallas.

As far as I am aware it is not common practice to add antiseptics to coconut oil shampoos. However, resorcinol is a very popular antiseptic in hair preparations such as tonics and lotions and it will probably be suitable for use in a coconut oil shampoo. Because resorcinol has a tendency to give light colored and gray hair a greenish tint it may not be suitable but I think, that it will make little difference in a shampoo. This can, perhaps, be avoided by the use of resorcinol monoacetate (Euresol). This liberates resorcinol slowly and does not show such staining tendencies.

In his text, "Modern Cosmeticology," R. G. Harry reports that he found the following substances capable of preventing the growth of common organisms found in the hair and scalp; parachlormetacresol, sodium ortho-phenyl phenate, batanaphthol, parachlormetaxylenol, potassium oxyquinoline sulfate. Perhaps one of these will be suitable for incorporation in coconut oil shampoo.

As an oil-soluble antiseptic for use in petrolatum hair preparations you might try a small proportion of chlorothymol. Perhaps more suitable would be salts of oxyquinoline, such as oxyquinoline benzoate.

MILKY SHAMPOOS: Can you furnish me with a formula for the new type of milky shampoos? There is quite a bit of it being used in the beauty shops and we will appreciate your cooperation in furnishing us with such a formula. Washington.

I am not quite certain as to just what you mean by a new type of milky shampoo but formulas for making milky shampoos have been published in the standard technical literature. For example, a milky hair wash based upon kerosene may be made from:

Trihydroxyethylamine Stearate	**10.0 parts**
Kerosene	**150.0 parts**
Pine Oil	**6.0 parts**
Water	**250.0 parts**

Heat the stearate with the kerosene to 140 degrees F. and stir until dissolved; then stir in the pine oil. Now allow the water to run in slowly with continuous stirring. If the pine oil is objectionable any other suitable oil may be employed in its place. This wash may be colored by means of a water-soluble salt-free dye.

Another type of preparation of this nature, a so-called "scalp milk," is suggested as follows:

Stearic acid	**6.0 parts**
Liquid petrolatum	**32.0 parts**
Triethanolamine	**2.0 parts**
Water, enough to make	**100.0 parts**

Heat the stearic acid and liquid petrolatum to 60 degrees C. Heat triethanolamine and water to same temperature. Mix and stir.

QUESTIONS

PERMANENT WAVE SOLUTION: Can you send me a formula for a permanent wave solution, made without ammonia, suitable for waving bleached and dyed hair? Milwaukee.

I would suggest that you try the following ammonia-free permanent wave solution. If you wish, you can add up to 1 per cent of lanolin which will help to counteract the effects of the solution on brittle or extremely dry hair:

Monoethanolamine	**12.0-16.0 parts**
Borax	**4.0 parts**
Potassium sulfite	**2.0 parts**
Water	**100.0 parts**

ANTISEPTIC CREAM: My company is interested in a formula for a cream to be used in the treatment of minor skin irritations, sun-burn and the like, similar to a popular cream now on the market. Can you direct me to a specific formula for this purpose or could you give me such a formula from your files? Passaic.

A good standard vanishing cream could be used as a basis for making an acceptable cream. The incorporation of an antiseptic, such as chlorothymol or the like would give the desirable antiseptic properties. It might also be well to incorporate a small proportion of a medicinal odor-producing substance, such as oil of eucalyptus.

UREA IN HAND CREAMS: Sometime ago I noticed an item in your publication on urea in hand creams. I have not been able to find this article and I would appreciate it if you would tell me the original source and the purpose of urea in such preparations. Philadelphia.

The article to which you refer was abstracted in the November, 1943 issue of DRUG AND COSMETIC INDUSTRY, page 553 from an article written by H. Rattner in the "Archives of Dermatology and Syphillology," 48:47, 1943. In this article it was pointed out that tests had shown that the incorporation of urea in hand creams produced superior whitening and softening effects than were obtained with ordinary hand creams.

CONTRACEPTIVE JELLY: Could you give me a formula for a jelly-type contraceptive? What advantage has the jelly type over the cream type? Grand Rapids.

A standard formula for a jelly-type preparation is as follows:

Lactic acid (85%)	**13.0 parts**
Tragacanth	**80.0 parts**
Boric acid	**55.0 parts**
Glycerine	**60.0 parts**
Distilled water	**1200.0 parts**

The cream-type contraceptives are somewhat more elegant cosmetically but the jelly type has been used most extensively in controlled clinical studies and appears to be somewhat more popular with physicians.

LITHIUM BROMIDE

One of sixteen lithium salts and eight Bromides available for prompt delivery at attractive prices. May we quote on your requirements?

CHEMO PURO MFG CORP

48th Ave. & 5th St., Long Island City 1, N. Y.

Founded 1854

FEZANDIE & SPERRLE, Inc.

205 Fulton Street, New York City

HIGHEST STANDARD

Colors and Dyes for Cosmetics, such as

LIPSTICKS — PERFUMES
ROUGES — LOTIONS
FACE POWDERS — SHAMPOOS
MASCARA — CREAMS
SOAPS — Etc.

Your inquiries are invited

THIOGLYCOLLIC ACID (PURE)
and its salts

GEORGE F. SMITH
CHEMICALS

60 East 42nd Street
New York 17, N. Y.

VAnderbilt
6-3098

COLORS
ALL SHADES
FOR
LEG MAKE UP

Send for samples and prices

Eastern Representative of Wm. J. Stange Co., Chicago, Ill.

LEEBEN CHEMICAL CO., Inc.

389 Washington St., New York 13, Tel.: WAlker 5-0210-0211

Professional Service

THE
COLUMBUS LABORATORIES
Analytical and Consulting Chemists
Bacteriologists
We have been solving problems pertaining to foods, drugs and cosmetics since 1893.
33 N. STATE ST. CHICAGO, ILL.

H. A. Seil, Ph.D. E. B. Putt, Ph.C., B. Sc.
SEIL, PUTT & RUSBY, Inc.
Analytical and Consulting Chemists
Formerly Experts for U. S. Dept. of Agriculture
Analyses Made Formulas Developed
Research Investigations Conducted
Specialists in the Analysis of
Beverages Essential Oils
Flavoring Extracts Toilet Preparations
Foods Spices Drugs
Proprietary Medicines Special Formulas
Pyrethrum, Rotenone and other Organic Insecticides
Lab's: 16 East 34th St. New York, N. Y.
Telephone MUrray Hill 3-6368

IDEAS
PATENT YOUR IDEAS
send a Sketch or Model of your invention for
CONFIDENTIAL ADVICE
FREE CONSULTATION LITERATURE
Z.H. Polachek
1234 BROADWAY NEW YORK
PATENT ATTORNEY ENGINEER
U. S. Pat. Off. records searched for ANY Invention or Trade Mark

GEORGE W. PEGG, PH. C.
Consultant
Drugs — Cosmetics — Industrial Alcohol
Flavoring Extracts
Labeling — Formulas — Processes
152 West 42nd St., New York 18, N. Y.
Telephone Wisconsin 7-3066
Washington Address: 2121 Virginia Ave., N.W.
Washington 7, D. C. c/o Dr. George W. Hoover

For
NATIONAL DISTRIBUTION
in the
WHOLESALE DRUG & DEPT. STORE FIELD
it's
JACK LEESE ASSOCIATES
551 Fifth Ave. New York 17, N. Y.
well-known, well-liked, well-connected
in the entire industry

Machinery for Sale

Complete line of rebuilt, guaranteed machinery. See detailed announcement on Page 328 of Consolidated Products Co., 20-21 Park Row, New York City.

CONVEYORS, DRYERS, FILLERS: Liquid powder, tube; Filters, Kettles, Labelers, Mills, Mixers, Coating Pans, Percolators, Sifters, Tablet Machines, Tanks, etc. Send us your inquiries and a list of your idle equipment. Loeb Equipment Supply Co., 912 North Marshfield Ave., Chicago 22, Ill.

FOR SALE: Colton and Stokes Tube and Jar Fillers; Rotex Sifters; Packaging and Labeling Machinery; Belt Conveyors; Powder Mixers; Pulverisers; Kettles; Tanks; etc. Your inquiries solicited. BRILL EQUIPMENT COMPANY, 225 WEST 34th STREET, NEW YORK 1, N. Y.

GUARANTEED rebuilt cosmetic and chemical equipment available for immediate shipment; Dry powder Mixers up to 3000 lbs.; Fillers for powders, liquids and semi-liquids; Stokes Tablet Machine, model O. H and R; Glass lined Tanks and jacketed Kettles up to 750 gallon capacity; Grinders, Pulverizers, Hammermills, Rotex Sifters, Roller and Belt Conveyors, Dryers, Portable Agitators, Pony Mixers. Send for complete list. FIRST MACHINERY CORP., 819-827 East 9th Street, New York, 9, New York.

JUST PURCHASED: 6—Stokes, Colton, Fitz-Killion Rotary Tablet Machines; 5—Stokes, Colton Single Punch Tablet Machines; Day 30" Copper Coating Pan; W. & P. 20 and 150 gal. Mixers; Ermold Labelers; Tube and Jar Fillers; Powder Mixers, 800 and 2000 lbs.; Pulverizers; Kettles; etc. Your inquiries solicited. BRILL EQUIPMENT COMPANY, 225 West 34th Street, New York 1, N. Y.

FOR SALE: 4—1/8" & 3/4" Single Punch Tablet Machines; Portable Electric Agitators 1/4 to 2 HP; 20-50 gal. agitated steel Tanks, with Nettco drives; Day 8 & 15 gal. Pony Mixers; Copper Jack. Kettles 15 to 150 gals.; 3—Homogenizers, 7 1/2 & 10 HP motors; Double Spiral Mixer 150 gal.; 2—Blystone jacketed, horizontal, Paddle Type, Steel Mixers, 2000 lbs. capacity; 40 to 150 gal. single & double arm, heavy duty, horizontal Mixers; Paste, Powder & Liquid Mixers; Filling Machinery; Kettles & Tanks; Grinders, Crushers & Pulverizers; Sifters & Screens; Pebble & Jar Mills; Stills & Columns; Filters & Filter Presses; Dryers; Centrifuges; Pumps. Send us your inquiries. We buy your surplus equipment. Stein Equipment Co., 426 Broome St., New York 13, N. Y.

10—New Stainless Steel Storage Tanks 22 1/4" dia x 35 1/4" deep—with Stands and Covers.
1—J. H. Day Paste Mixer—36" dia. x 22" deep.
1—International 14 Spout Stainless Steel Vacuum Filler for small bottles—2 3/4" centers—5/16" spouts.
5—Labelers—Semi-Automatic—World—Ermold—National.
9—J. H. Day Paste & Dough Mixers, 15 to 70 gallon cap.
1—Stokes Chemical Mixer, Jacketed—3' x 4' x 8' long with agitator.
1—Consolidated Single Head Automatic Rotary Powder Filler—Stainless Steel Hopper.
Also:—Pumps—Steel Storage Tanks, Air Compressors, Copper Coils. Write For Latest Stock List. PERRY EQUIPMENT & SUPPLY COMPANY, 1515 W. Thompson Street, Phila., 21, Pa.

SALES REPRESENTATION

Capable, thorough and frequent coverage of toilet goods outlets, on commission or fee basis. We invite investigation.

MERZ-MIHM, 38 W. 32nd St , New York, N. Y., or 567 E. Illinois St., Chicago, Ill.

Classified

Machinery for Sale

ANNOUNCEMENT
WE ARE NOW LOCATED IN OUR OWN BUILDING AT: 533 WEST BROADWAY, NEW YORK 12, N. Y. EXTENDED FACILITIES PERMIT US TO DISPLAY ALL OUR EQUIPMENT UNDER ONE ROOF. A CORDIAL INVITATION IS EXTENDED TO ALL TO VISIT US. MACHINERY & EQUIPMENT CORPORATION OF (N.Y.), 533 West Broadway, New York 12, N. Y. GR 5-6680.

Machinery Wanted

HIGHEST PRICES PAID FOR GOOD EQUIPMENT. FIRST MACHINERY CORPORATION, 819-837 East 9th St., New York 9, N. Y.

Help Wanted

CHEMIST wanted by importer who is starting to manufacture essential oils, and aromatic chemicals, for food and drug trade. Prefer individual with experience in the actual manufacture. Write in detail regarding experience, salary requirements, and etc. Box 593, DRUG & COSMETIC INDUSTRY.

BEVERAGE FLAVOR CHEMIST with past experience in cola and true fruit flavors on consulting and assignment basis to develop worthwhile formulae. Submit full details as to experience. Box 608, DRUG & COSMETIC INDUSTRY.

Situations Wanted

LIBRARY SPECIALIST. Technically trained chemist, ten years experience, located permanently in Washington, D. C. with its unsurpassable library and fact finding resources will accept part time or fee employment; conduct suitable library surveys and investigations, follow and report specific developments, patents, etc.; examine individual or periodic publications, secure specialized information, etc.; small assignments acceptable. Box 605, DRUG & COSMETIC INDUSTRY.

PRODUCTION MANAGER. A chemical engineer, age 38 with a sound background of experience in all phases of business from development through marketing is looking for a responsible job. Fifteen years of experience in the manufacture of all types of pharmaceuticals, cosmetics, and toilet goods. Imagination, initiative, and the ability to organize and supervise. Northern New Jersey location preferred. Box 607, DRUG & COSMETIC INDUSTRY.

Business Opportunities

CONSULT me about formulation and preparation of Toiletries (Creams, Skin-Hair-Mouth-Bath Lotions, etc.) Prompt reliable expert advice. Free samples and preliminary suggestions without obligation. "Pharmaceutical Consultant," 19 Valley Road, White Plains, N. Y.

WELL ESTABLISHED Wholesale Drug House in Canada would consider additional lines for Jobbers or Drug Trade. Manufacturing and Packaging equipment available. Box 606, DRUG & COSMETIC INDUSTRY.

FOOD RESEARCH LABORATORIES
Founded in 1922

"Accurate vitamin assays are the paving stones on the pathway to nutritional discovery."

FOOD RESEARCH LABORATORIES, Inc.
RESEARCH AND CONSULTATION FOR THE DRUG AND ALLIED INDUSTRIES
Food Research Laboratories Building, 48-14 Thirty-Third Street
Long Island City 1, New York • Telephone STillwell 4-4814

VOLCLAY BC MICRON BENTONITE

BENTONITE

BC VOLCLAY is colloidal bentonite in its purest form—a soft, impalpable, grit-free powder.

Sample on request

AMERICAN COLLOID COMPANY
363 W. Superior Street • CHICAGO, ILLINOIS

TERPIN HYDRATE

SEYDEL

U. S. P.
CRYSTALS and POWDER

Comprehensive Booklet
Available on Request.

SEYDEL CHEMICAL CO.
ESTABLISHED 1904 JERSEY CITY 2, N. J.

falba
Reg. U. S. and Foreign Countries
The Heart of LANOLIN
THE ORIGINAL ABSORPTION BASE
Write for booklet
Pfaltz & Bauer, Inc.
EMPIRE STATE BUILDING, NEW YORK

EXCLUSIVE
PRIVATE BRAND
COSMETICS

COSMIA

COSMIA LABORATORIES
95 MADISON AVENUE
NEW YORK 16, N. Y.

POLAK & SCHWARZ, INC.
667 Washington St. New York, N. Y.

Perfume Bases
Compositions and Specialties
Essential Oils Flower Oils
Terpeneless Oils Aromatic Chemicals
Ethers and Esters
Flavors and Extracts

STABILIZED
Cold Wave BASE

AQUEOUS . . . . . CONCENTRATED
PRECISELY BALANCED ALKALINITY
NO DISCOLORATION WHEN EXPOSED TO AIR

VACUUM DISTILLATION COMPANY
617 N. Kingshighway, St. Louis (8), Mo.

GUMS

ARABIC KARAYA TRAGACANTH
QUINCE SEED GALL NUTS

D. S. DALLAL & CO.
261 Fifth Ave., New York 16
IMPORT MUrray Hill 3-0452 EXPORT

STEARATES

ZINC STEARATE
CALCIUM STEARATE
ALUMINUM STEARATE
MAGNESIUM STEARATE

STEARATE OF MAGNESIUM

Light, Great Adhesiveness. Pure White. Immeasurable Fineness. Heavy if desired. Dusts out under the puff like the finest pollen. Made to satisfy most exacting requirements.

Prompt Shipments in any quantity
Write for samples and prices

STOCKS CARRIED: Chicago, St. Louis, San Francisco, Los Angeles, Kansas City, Mo., Philadelphia, Shawnee, Oklahoma.

STEARATE OF ZINC

Odorless, Impalpable. Pure White. Water Resisting. Great Adhesiveness. Light or Heavy as desired. Highest standard of Purity and Uniformity.

FRANKS CHEMICAL PRODUCTS CO., INC.
55—33RD STREET BROOKLYN, N.Y.
BUSH TERMINAL BLDG. NO. 9

Index to Advertisers

Abbott Laboratories....358
Allied Products, Inc....Insert facing 268
Aluminum Seal Co....Insert facing 320
American Cholesterol Products, Inc....350
American Colloid Co....367
American Druggist....300
Anchor-Hocking Glass Corp....290
Andresen, J. C....346
Ansbacher-Siegel Corp....269
Armour & Company....362
Armstrong Cork Co....294
Aromatic Products, Inc....Insert facing 257
Baker Chemical Co., J. T....Insert facing 312
Bender Corp., The....339
Benzol Products Co....352
Bridgeport Metal Goods Mfg. Co....306
Broder, Harry, Inc....303
Brown Bag Filling Machine Co....330
Burke Company, Edward S....363
Bush & Co., W. J....360
Calco Chemical Co., Inc....261
California Fruit Growers Exchange....Insert facing 345; 362
Carbide & Carbon Chemical Corp....268
Carr-Lowrey Glass Co....292
Celluplastic Corp....301
Chemo-Puro Mfg. Corp....365
Colgate-Palmolive-Peet Co....364
Collins Laboratories, Inc....363
Colton Co., Arthur....330
Consolidated Fruit Jar Co....328
Consolidated Products Co., Inc....328
Continental Can Co....331
Cosmia Laboratories....367
Dallal & Co., D. S....367
Dispergent Co., The....264
Dodge Cork Co....302
Dodge & Olcott Co....Insert facing 272
Dow Chemical Co....Insert facing 344; 251, 334
Dreyer, Inc., P. R....258
Drury & Co., A. C....354
Duche & Sons, Inc., T. M....348
Dunkel & Co., Paul A....355
du Pont de Nemours & Co., Inc., E. I....Insert between 268-269
Durlin Corp....Insert between 260-261
Duval Compagnie....364
Eisler Engineering Co....330
Empire Box Corp....299
Eppenbach, Inc....324
Ertel Engineering Corp....326
Evans Chemetics, Inc....262
Fairmount Chemical Co....364
Felton Chemical Co., Inc....Insert facing 260
Fezandie & Sperrle, Inc....365
Fine Organics, Inc....339
Firmenich & Co., Inc....Insert between 260-261
Florasynth Labs., Inc....Insert facing 265
Fontaine Products Corp....304
Food Research Laboratories, Inc....367
Franks Chemical Prod. Co., Inc....368
Fritzsche Bros....Insert between 336-337
Gardner-Richardson Co....Insert facing 304
General Drug Co....Insert facing 256
General Electric Co....327
Givaudan-Delawanna, Inc. Insert between 272-273
Greeff & Co., R. W....350
Gunning and Gunning....356
Hagerty Bros. & Co....330
Hazel-Atlas Glass Co....Insert facing 297
Helfrich Labs., Inc....Insert facing 305
Hema Drug Co., Inc....363
Heyden Chemical Corp....Insert facing 341
Hinde & Dauche Paper Co., The....305
Hopkins & Co., J. L....356
Hormann & Co., F. R....328
Huisking & Co., Inc., Chas. L....348
Illinois Water Treatment Co....325
Industrial Chemical Sales....Cover 2
Inland Alkaloid Co....346
Interstate Color Co., Inc....339
Jelly & Co., Walter H....360
Kachurin Drug Co....342
Kelton Cosmetics Co....354
Kessler Chemical Co....355
Kiefer Machine Co., Karl....Insert facing 321
Kimble Glass Co....Insert facing 252
Kohnstamm & Co., H....Insert facing 261
Kolmar Laboratories....Insert between 256-257
Kurz-Kasch, Inc....307
Lautier Fils....354
Leeben Chemical Co., Inc....365
Lemke, Co., B. L....352
Lloyd, John T....352
Lueders & Co., George....263
Lusteroid Container Co....307
Magnus, Mabee & Reynard, Inc....265
Mallinckrodt Chemical Wks....Insert facing 273
Malmstrom & Co., N. I....272
Maryland Glass Corp....Insert facing 296
Merck & Co., Inc....260
Metal-Glass Products Co....306
Monsanto Chemical Co....314
National Can Co....254, 255
Naugatuck Aromatics....266
New England Collapsible Tube Co....249
N. Y. Quinine & Chemical Works....252
Norda Essential Oil & Chemical Co....270
Orbis Products Corp....308
Oxzyn Company....317
Package Machinery Co....322
Parento Co., Compagnie....Insert facing 269
Paris Cosmetics, Inc....Insert between 264-265
Parsons Imports, M. W....342
Penick & Co., S. B....Insert between 264-265
Pfaltz & Bauer Co., Inc....367
Pfizer & Co., Inc., Chas....Cover 4
Pittsburgh Plate Glass Co....333
Pneumatic Scale Corp., Ltd....Insert between 268-269
Polak & Schwarz, Inc....367
Powell & Co., Inc., John....361
Pulverizing Machinery Co....326
Purocaine Chemical Co....348
Radio Corp. of America....256
Republic Filters, Inc....333
Ritchie & Co., W. C....Insert facing 313
Robinson Wagner Co....338
Ross, J. O., Engineering Corp....329
Schimmel & Co., Inc....253
Seeley & Co., Inc....358
Seydel Chemical Co....367
Sherwood Refining Co....343
Smith, George F....365
Sonneborn Sons, Inc., L....267
Stafford-Allen & Sons....271
Standard Alcohol Company....338
Standard Synthetics, Inc....Insert facing 340
Stanton Laboratories....259
Stevens-Wiley Mfg. Co....332
Stokes Machine Co., F. J....318
Stokes & Smith Co....328
Sturge Ltd., John & E....257
Swindell Bros., Inc....298
Syntomatic Corp....Insert facing 264
Thurston & Braidich....332
Tombarel Products Corp....359
Ungerer & Co., Inc....Cover 3
U. S. Bottlers Machinery Co....333
U. S. Industrial Chemicals, Inc....Insert between 316-317
Vacuum Distillation Co....367
van-Ameringen-Haebler, Inc....Insert between 252-253
Vanderbilt Co., R. T....352
Van Dyk & Co....Insert facing 253
Verley & Co., Albert....310
Vorac Company, The....350
Wax & Rosin Products....364
Welch, Holme & Clark, Inc....343
Whittaker, Clark & Daniels, Inc....357
Will & Baumer Candle Co....332
Wilson Laboratories, Inc....346
Wolf & Co., Jacques....350